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1897/98

SOUTH DAKOTA AGRICULTURAL COLLEGE



- I. OFFICERS AND STUDENTS.
- II. GENERAL INFORMATION.
- III. DESCRIPTION OF WORK OFFERED.

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CATALOG.

1897-1898.

PUBLISHED BY THE COLLEGE
BROOKINGS, S. D. 1898.
PRESS PRINT.





VIEW OF CAMPUS.

THE
SOUTH DAKOTA
AGRICULTURAL COLLEGE

CATALOG.

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WITH ANNOUNCEMENTS FOR 1898-1899.

**PUBLISHED BY THE COLLEGE,
BROOKINGS, S. D.,
JUNE, 1898.**

CONTENTS.

PART I.

OFFICERS AND STUDENTS.

- A—Regents of Education and Organization.
 - B—Faculty, Other Employes and Tutors.
 - C—Alumni and Organizations.
 - D—Students and Organizations.
-

PART II.

GENERAL INFORMATION.

- A—History and Developement.
 - B—General Equipment.
 - C—Administration.
 - D—Information for Students.
-

PART III.

DESCRIPTION OF DEPARTMENTS AND WORK.

Calendar and Schedule.

- | | |
|--|------------------------------------|
| <i>Ae-Arch't'l and Agl. Engineering.</i> | <i>Hi-History and Civics.</i> |
| <i>Ar-Art.</i> | <i>Ho-Horticulture.</i> |
| <i>Ag-Agriculture.</i> | <i>Ln-Languages.</i> |
| <i>Dy-Dairying.</i> | <i>Ms-Mathematics.</i> |
| <i>Bt-Botany.</i> | <i>Mi-Military.</i> |
| <i>Ch-Chemistry.</i> | <i>Mu-Music and Physical Cult.</i> |
| <i>Ex-Experiment Station.</i> | <i>Me-Mechanical Engineering.</i> |
| <i>Cl-Commercial.</i> | <i>Se-Steam Engineering.</i> |
| <i>Ds-Domestic Science.</i> | <i>Py-Pharmacy.</i> |
| <i>Eh-English.</i> | <i>Ph-Physics.</i> |
| <i>Ec-Economics and Philosophy.</i> | <i>Pr-Preparatory.</i> |
| <i>Gl-Geology and Agronomy.</i> | <i>Zo-Zoology.</i> |

REGENTS OF EDUCATION.

HON. H. H. BLAIR,.....Elk Point.
HON. ROBERT W. HAIRE,.....Aberdeen.
HON. CHARLES N. HERRIED,.....Eureka.
HON. L. M. HOUGH,Sturgis.
HON. F. A. SPAFFORD,.....Flandreau.

OFFICERS.

President—Hon. H. H. Blair.

Secretary—Hon. Robert W. Haire.

Treasurer—Hon. Kirk G. Phillips. (State Treasurer.)

HON. F. A. SPAFFORD, Regent Committee for the
College.

MR. A. M. ALLEN, Secretary of the College.

FACULTY.

IN ALPHABETICAL ORDER AFTER PRESIDENT.

JOHN WILLIAM HESTON, Ph. D., LL. D., *President,*
Professor of History and Economics.

GEORGE LINCOLN BROWN, M. S., *Secretary.*
Professor of Mathematics and Astronomy.

EDGAR ALBERT BURNETT, B. S.,
Professor of Animal Husbandry and Dairy Science.

ELLERY CHANNING CHILCOTT, M. S.,
Professor of Geology and Agronomy and Agriculturist to
the Experiment Station.

AUSTIN BENJAMIN CRANE, B. S.,
Assistant in Mathematics and Engineering.

STACY AUGUSTUS COCHRANE,
Assistant in Agricultural Engineering.

ARTHUR BOONE CROSIER,
Professor of Commercial Science.

NELLIE ELMINA FOLSOM, B. S.,
Professor of English Language.

ISABELLA RUSSELL FRISBIE, B. S.,
Professor of Domestic Science.

MARTIN LUTHER HALEY,
Assistant in Dairy Science.

NIELS EBBSEN HANSEN, M. S.,
Professor of Horticulture and Forestry, and Horticultur-
ist to the Experiment Station.

ALBERT SPENCER HARDING, M. A.,
Assistant in History and Economics.

ANDREW BOTTOLOF HOLM, B. S.,
Assistant to the Experiment Station, in Soil Physics.

HARLEY HAYES HUSTED, B. S.,
Assistant in Music and Mathematics.

MARCUS JOHNSON,

Assistant in Steam Engineering.

EVA PLOCKER MATHEWS, M. S.,

Professor of Industrial Art.

HUBERT BERTON MATHEWS, B. S.,

Professor of Physics.

DICE McLAREN, M. S., M. D.,

Professor of Zoology and Animal Pathology, and Zoologist to the Experiment Station.

FRANK GREGORY ORR,

Librarian and Assistant in the Commercial Department.

ANNA ROWELL PARKER, B. S.,

Private Secretary to the President.

EDITH LOUISE PRATT,

Professor of Music and Director in Physical Culture.

ROBERT ROE, B. S.,

Assistant in Agriculture and Mathematics.

ADDISON ROBERTS SAUNDERS, M. E.,

Professor of Architectural and Agricultural Engineering.

DE ALTON SAUNDERS, A. M.,

Professor of Botany and Entomology, and Botanist and Entomologist to the Experiment Station.

JAMES HENRY SHEPARD, B. S.,

Professor of Chemistry and Director and Chemist to the Experiment Station.

HALVOR CHRISTIAN SOLBERG, M. E.,

Professor of Mechanical and Steam Engineering.

PERCY ELTON TRIPPE, CAPTAIN U. S. A.,

Professor of Military Science and Tactics.

WALTER STRICKLAND THORNBURGH, B. S.,

Assistant in Horticulture and Botany.

BOWER THOMAS WHITEHEAD, B. S., Ph. C.,

Professor of Pharmacy.

————— (Not yet appointed.)

Professor of Modern Languages.

————— (Not yet appointed.)

Assistant in Languages.

OTHER EMPLOYES AND STUDENT DETAILS.

FLORENCE LUELLA AINSWORTH, *English Department.*
ALICE EDNA BARTON, *Library.*
LOUIS BECK. *Janitor.*
CHARLES HAECK, *Teamster.*
CHARLES HARDING, *Mail Carrier.*
JOHN HARTMAN, *Teamster Department of Horticulture.*
WILLIAM HARTUNG, *Foreman of Farm.*
HERBERT HARDING HODGESON, *Department of Physics.*
WILLIAM HAW KNOX, *Department of Chemistry.*
LILLIAN LANGDON, *Stenographer Experiment Station.*
GERALDINE WINIFRED LOUCKS, *Library.*
ISAAC NACHTIGAL, *German.*
JUDSON ROSELLE TOWNE, *Department of Botany.*
GEORGE HUMPHRY WEST, *Department of Zoology.*
ALBERT WILLIAMS, *Herdsman of Farm.*
WILLIAM WEST, *Foreman of Experiment Farm.*

TUTORS FOR 1898-1899.

ENGLISH—Ray Dillman, L. V. Brown, Callie Williams.
MATHEMATICS—Howard H. Sherwin, J. W. C. H. De La,
Mattison H. Dougherty.
HISTORY—Ina Colegrove, Alice M. Mathews.
PHYSICS—Fred Dodge, Fred Curtis.
BOTANY—Wm. H. Lawrence, C. D. Kendall.
ZOOLOGY—George H. West, Lee R. Girton.
COMMERCIAL—Orin V. Lamb, Andrew Buskrud.
ART—Susie Bagley.
DOMESTIC SCIENCE—Minnie Lawrence.
MECHANICAL ENGINEERING—C. Le Roy Kennedy.
PHARMACY—James B. Holsey.
LANGUAGES—Nellie Mason, Isaac Nachtigal.
AGRICULTURE—John Hatton.
HORTICULTURE—Peter E. Bunsness.
MUSIC AND PHYSICAL CULTURE—Esther Carlson.
ECONOMICS—Ralph Towne.

GRADUATES.

Name.	Class. Degree.	Occupation.	Address.
Ainsworth, Cephas B.,	'97 B. S.	Bank Clerk.	Estelline
*Aldrich, Ellen (Roe)	'89 B. S.		
Aldrich, Irwin D.	'91 B. S.	Co. Supt.	Milbank
Aldrich, John M.	'88 M. S.	Prof. Univ. Idaho.	Moscow, Io
Allen, William C.	'89 B. S.	Physician	Chicago, Ill
Allison, Wm. F.	'95 B. S.	Maj. U. S. A.	Brookings
Atkinson, Jesse C.	'96 B. S.	Farmer.	White
Atkinson, George W.	'97 B. S.	Teacher	White
Atkinson, Walter	'97 B. S.	Civil Engineer	White
Austin, Steven E.	'92 B. S.	Machinist	Omaha, Neb
Bates, Edmund T.	'93 B. S.	Farmer	Onslow, Ia
Bacon, Nora (Updyke)	'91 B. S.	Housewife	Chicago, Ill
Beck, Milton	'93 B. S.	Inventor	Toronto. Can
Bell, William D.	'91 B. S.	Editor	Slayton, Minn
Bentley, William S.	'91 B. S.	Physician	Gary
Boswell, Kate L.	'89 B. S.	Teacher	Estelline
Boyden, Frank E.	'97 B. S.	Teacher	Aurora
Brown, Cyrus O.	'94 B. S.	Attorney	Tingley, Ia
Brown, Ida (Dibble)	'96 B. S.	Housewife	Lincoln, Neb
Brown, James A.	'94 M. S.	G. Student	Lincoln, Neb
Brooke, Grace (Lawshe)	'89 B. S.	Housewife	Brookings
Brown, Sarah	'95 B. S.	Teacher	Shannon City, Ia
Carter, Lewis W.	'96 B. S.	Farmer	Doland
Chamberlain, Sarah B.	'91 B. S.	Nurse	Chicago, Ill
Clevenger, John W.	'97 B. S.	G. Student	Brookings
Cornell, Harry M.	'95 B. S.	Bank Clerk	Lake Benton, Minn
Crane, Austin B.	'91 B. S.	Instructor	Brookings

*Deceased.

Name.	Class. Degree.	Occupation.	Address.
Crane, May (Cranston)	'89 B. S.	Housewife	Brookings
Cross, Alvah G.	'89 B. S.	Traveling Salesman	Huron
Cunningham, Sarah (Haber)	'89 B. S.	Housewife	Spokane, Wash
Davis, Homer	'91 B. S.	Teacher	Marion
Davis, Samuel H.	'92 B. S.	Farmer	Plankinton
Day, John M.	'90 B. S.	Farmer	Grand Bay, Ala
Dillon, Willis C.	'91 B. S.	Attorney	Duluth, Minn
Downing, Jennie C.	'96 B. S.	Teacher	Brookings
Dibble, Hattie (Doughty)	'91 B. S.	Housewife	Arlington
Edgerton, William M.	'93 B. S.	Physician	Faulkton
Egeberg, Hildus	'90 B. S.	Farmer	Brookings
Eno, Durell G.	'89 B. S.	Machinist	Mount Vernon
Frick, Mary A.	'91 B. S.	Stenographer	Winona, Minn
Fourt, Fanny (Shannon)	'91 B. S.	Housewife	Fairfield, Ia
Grady, Francis A.	'89 B. S.	Attorney	Parkston, Minn
Griffiths, David	'92 B. S.	Teacher	Aberdeen
Grattan, Paul H.	'96 B. S.	G. Student	Iowa City, Ia
Haasarud, Ole H.	'90 B. S.	Teacher	Bratsburg, Minn
Hamlin, Jr. John R.	'92 B. S.	Photographer	Casseltown, N. D.
Hann, Jay B.	'91 B. S.	Teacher	Pierre
Harding, Albert S.	'92 B. S.	Instructor	Brookings
Hargis, Christie E.	'97 B. S.		Brookings
Harkins, Lilla A.	'90 B. S.	Prof. M. A. C.	Bozeman, Mont
Hatfield, Ira H.	'92 B. S.	Attorney	Lincoln, Neb
Hazel, Wm. A.	'97 B. S.	Lieut. U. S. A.	Lebanon
Hegeman, Harry A.	'96 B. S.	Capt. U. S. A.	Brookings
Holm, Andrew B.	'96 B. S.	Assistant	Brookings



MECHANICAL DRAWING ROOM.

Name.	Class. Degree.	Occupation.	Address.
Hopkins, Mrs. C. G.	'94 B. S.	Housewife	Champaign, Ill
Hopkins, Cyril G.	'90 B. S.	Chemist in U. S. Ex. Sta.	Champaign, Ill
Hoy, Howard H.	'96 B. S.	G. Student	Lincoln, Neb
Husted, Harley H.	'97 B. S.	Instructor	Brookings
Irish, Henry C.	'91 B. S.	Ass't Shaw Botan- ical Gardens	St. Louis, Mo
Irish, Maggie (Duffey)	'90 B. S.	Housewife	St. Louis, Mo
Jenkins, John C.	'90 B. S.	Attorney	Brookings
Jolley, William G.	'97 B. S.	Teacher	Highmore
Keeney, Emma A.	'92 B. S.	Physician	Spring Valley, Minn
Korstad, Hans	'89 B. S.	Editor	Brookings
Kenyon, Arthur H.	'90 B. S.	Real Estate	Spokane, Wash
Korstad, Mary	'96 B. S.	Teacher	Brookings
Larson, Lars K.	'89 B. S.	Cashier	Dell Rapids
Lawrence, Phillip A.	'88 B. S.	Attorney	Castlewood
Lewis, Perry	'91 B. S.	Tinner	Mankato, Minn
Luke, Fred K.	'94 B. S.	G. Student	Ithaca, N. Y.
Lusk, Willard C.	'96 B. S.	Editor	Mo. Valley Junction, Ia
Madden, Cassie E.	'97 B. S.	Teacher	Brookings
Madden, Margaret	'92 B. S.	Teacher	Brookings
Mathews, Alta K.	'96 B. S.	Teacher	Clark
Mathews, Emma N.	'96 B. S.	Teacher	Bryant
Mathews, Eva (Plocker)	'92 M. S.	Prof. Art	Brookings
Mathews, Hubert B.	'92 B. S.	Prof. Physics	Brookings
Mayland, Mabel C.	'95 B. S.	G. Student	Madison
McAndrew, James E.	'92 B. S.		Iroquois
McKenney, Duston W.	'89 M. S.	Director Man. Train- ing School	Davenport, Ia

Name.	Class. Degree.	Occupation.	Address.
McLouth, Benjamin F.	'93 B. S.	Draughtsman	Cleveland, O
McLouth, Ida B.	'92 B. S.	Industrial Art	Janesville, Wis
McLouth, Lewis C.	'89 B. S.	Manual Training Director	Cleveland, O
Mork, Albert A.	'89 B. S.	Clerk	Brookings
Olson, Eva L.	'97 B. S.	Teacher	Bruce
Orcutt, Carrie (Ross)	'89 B. S.	Housewife	Owatonna, Minn
Parker, Anna R.	'95 B. S.	Stenog.	Brookings
Parker, Fannie	'94 B. S.	Teacher	Great Falls, Mont
Parsons, Thomas S.	'94 B. S.	G. Student	Brookings
Pratt, Alice (Robinson)	'91 B. S.	Stenog.	Great Falls, Mont
Pyne, Estel W.	'90 B. S.	Music Dealer	Santa Anna, Cal
Robertson, Ada N.	'93 B. S.	Teacher	Helena, Mont
Robertson, Clarence H.	'93 B. S.	Instructor	La Fayette, Ind
Rogers, Edmund	'90 B. S.		
Ross, Abbie E.	'89 B. S.	Missionary,	China
Roe, Guy W.	'90 B. S.	Manufacturer,	McIntyre, Ia
Roe, Robert	'97 B. S.	Assistant	Mellette
Salisbury, Edith M.	'95 B. S.	Clerk	Ashton
Sasse, Ernest G.	'96 B. S.	G. Student	Minneapolis, Minn
Sayler, Marcus A.	'86 B. S.	R. E.	Tacoma, Wash
Schlosser, Thomas F.	'92 B. S.	Clergyman	Chicago, Ill
Schoppe, W. J. A.	'93 B. S.	Teacher	Yankton
Sevy, Isaac B.	'95 B. S.	Clergyman	Wessington
Shuster, John W.	'97 B. S.	G. Student	Lincoln, Neb

Name.	Class. Degree.	Occupation.	Address.
Sloan, Nettie	'92 B. S.	Dressmaker	Brookings
Solberg, Halvor C.	'91 B. S.	Prof. of Mech. Eng.	Brookings
Stoner, Minnie A.	'90 B. S.	Prof. D. E.	Knoxville, Tenn
Sproul, Alex. H.	'94 M. S.	Teacher	Elgin, Ill
Sproul, William C.	'95 B. S.	Draughtsman	Rockford, Ill
Tanzy, Hattie (Dibble)	'94 M. S.	Housewife	Artesian
Tanzy, Marvin F.	'94 B. S.	Farmer	Artesian
Thorner, John J.	'95 B. S.	Teacher	Nebraska City, Neb
Thorner, Walter S.	'97 B. S.	Assistant	Brookings
Valleau, Vinal B.	'91 B. S.	Train Dispatcher	Chicago, Ill
Walters, William H.	'97 B. S.	Clerk	Bruce
Wardall, Anna L.	'89 B. S.	Physician	Topeka, Kan
Wardall, Norman M.	'90 B. S.	Bookkeeper	Huron
Waters, George D.	'94 B. S.	Teacher	Madison
Wellman, Lulab E.	'88 B. S.		Jamestown, N Y
West, Hugh H.	'91 B. S.	Physician	Kewaunee, Ill
West, Orpha K.	'97 B. S.	Teacher	Brookings
Whaley Neva M.	'97 B. S.	Teacher	De Smet
Whitten, John C.	'92 B. S.	Prof. Hor.	Columbia, Mo
Wilcox, Alice E.	'97 B. S.	Teacher	Thawville, Ill
Wilcox, Ernest N.	'95 B. S.	Teacher	Thawville, Ill
Williams, Effie (Snell)	'92 B. S.	Housewife	Washington, D C
Williams, Elinor	'94 B. S.	Teacher	Weeping Water, Neb
Williamson, Albert	'96 B. S.	G. Student	Brookings
Winegar, Albert J.	'92 B. S.	Draughtsman	Rockford, Ill

Wolgemuth, Lee E.	'91 B. S. Assistant	La Fayette, Ind
Work, Lloyd E.	'97 B. S. Editor	Delta, Col
Young, Grace M.	'97 B. S. Teacher	Brookings
Young, Gilbert A.	'94 B. S. Assist. Mech. Eng.	Brookings

ALUMNI ASSOCIATION.

DR. WILLIAM S. BENTLY, '91, President.

JOHN C. JENKINS, '90, Vice President.

IRWIN D. ALDRICH, '91, Second Vice President.

JENNIE C. DOWNING, '96, Third Vice President.

ANNA R. PARKER, '95, Secretary and Treasurer.

GRADUATE CLUB.

ALBERT S. HARDING, '92, President.

HANS KORSTAD, '89, Vice President.

EVA P. MATHEWS, '92, Secretary and Treasurer.

LIST OF STUDENTS.

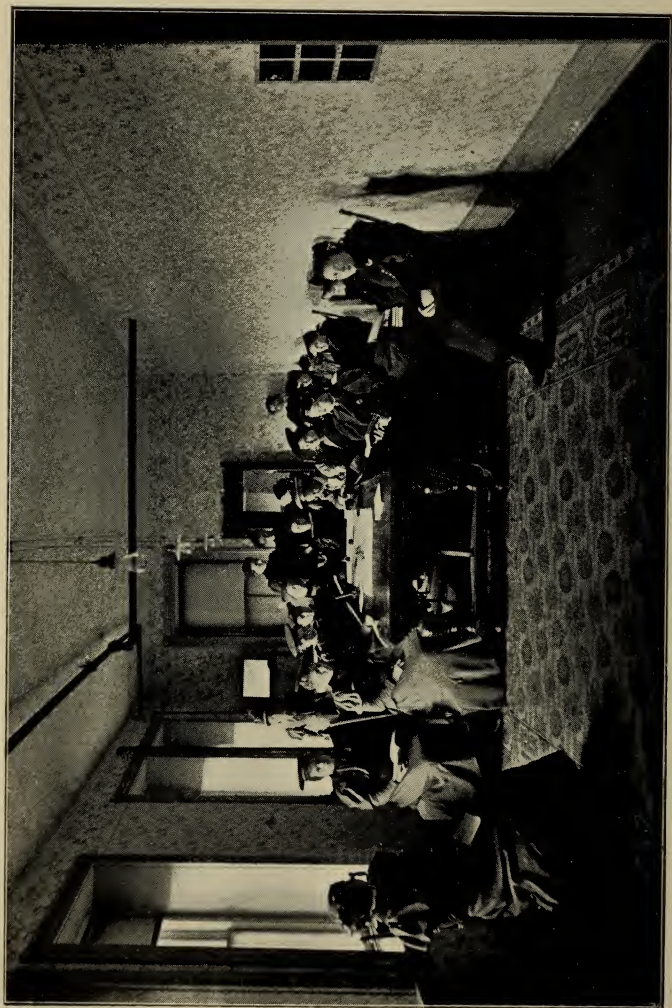
Name.	Major	Address.
Aaland, Hannah	Ar.	Howard
Aaland, Marie	Ar.	Howard
Aanrud, Martin	Sp.	Hanson
Adams, Clarence	Me.	Brookings
*Adams, John	Py.	Groton
Adkins, L. J.	Se.	Sisseton
Ainsworth, Cephas	Me.	Baraboo, Wis
Ainsworth, Flora	Ds.	Baraboo, Wis
Ainsworth, Howard	Me.	Baraboo, Wis
Akers, Edward	Pr.	Mellette
Allen, Clara	Cl.	Parker
Allen, Edward P.	Pr.	Parker
Allison, Helen	Sp.	Alpena
Alton, Frank	Cl.	Brookings
Alseth, Matilda	Ds.	Lake Preston
Anderson, Andrew H.	Sp.	Prairie Farm
Andersen, Angel	Sp.	Volin
Anderson, Clark	Ag.	Chamberlain
Anderson, Clinton	Cl.	Bancroft
Anderson, Helma	Pr.	Brookings
Anderson, Roy	Se.	Chamberlain
Andrews, Alra A.	Cl.	White
Andrews, Bonnie	Ds.	Brookings
Arneson, Charles E.	Se.	Benclare
Archer, Daisy	Cl.	Faulkton
Arsenian, Arsen O.	Dy.	Cavour
Ashley, Meacham Jesse	Me.	Smyth
Aslakson, Joseph B.	Cl.	Brookings
Atkinson, George W.	Ec.	White
Atkinson, Walter	Me	White
Bagley, Susie	Ds.	Brookings
Bailey, Ray D.	Ag.	Clark
Bailey, Ray W.	Py.	Milbank

*Registered in 96-97 and not in 97-98.

Name.	Major.	Address.
Baldwin, Corwin	Py.	Olivet
Barton, Alice E.	Ds.	Brookings
Bassinger, Fred	Cl.	Mellette
<i>Beatty, Joseph W.</i>	Se.	Bonilla
Beck, Louis	Me.	St. Lawrence
Beck, Ida May	Ar.	St. Lawrence
Beebe, Jay L.	Py.	Lake Crystal, Minn
Benbow, Anna B.	Cl.	Galla
Benbow, Cora M.	Ds.	Galla
<i>Benbow, Ernest J.</i>	Sp.	Galla
Benedict, Irvie J.	Me.	Watertown
Berner, Mary	Cl.	Henry
<i>Berntson, Peter</i>	Cl.	Brookings
Bevers, Maude	Cl.	Willow Lakes
<i>Bigler, Blanche</i>	Sp.	Brookings
Bjerke, H. T.	Se.	Brookings
Bolles, Myrick N.	Me.	Coleman
Bolles, Laura J.	Ds.	Coleman
<i>Bonin, Richard</i>	Bt.	Elkton
Bork, Emma	Sp.	Revillo
Bortnem, Oscar	Me.	Brookings
Bortnem, Andrew	Me.	Brookings
Bowman, Orbra	Cl.	Mellette
Boyden, Alonzo M.	Pr.	Brookings
<i>Boyden, Frank E.</i>	Ag.	White
<i>Boyer, Laura M.</i>	Mu.	Ashton
<i>Boyer, William L.</i>	Dy.	Ashton
Boyd, Mary	Ds.	Brookings
Brace, Edith	Ds.	Higmore
Bratsburg, H. T.	Dy.	Dell Rapids
Brosseau, J. E.	Py.	Bradley
Brown, L. V.	Me.	Reynard, Mo
<i>Brown, Minnie A.</i>	Pr.	Parker
<i>Bryant, John</i>	Cl.	Oldham
<i>Budlong, J. Welton</i>	Cl.	Hitchcock
Bullen, Clare H.	Me.	Ashton

Name.	Major.	Address.
Bullis, Ira N.	Pr.	Brookings
Bunsness, Peter E.	Ag.	Bath
Bunting, William	Ph.	Albee
Burnett, Lyman C.	Ag.	Brookings
Burt, George	Pr.	Waverly
<i>Bursheim, Pedr.</i>	Se.	Brookings
Buskrud, Andrew	Cl.	Hazel
Byrne, May	Sp.	Volga
Campbell, Bertha	Ds.	Brookings
<i>Carlson, D. H.</i>	Sp.	Irwin
Carlson, Ella Marie	Ds.	Irwin
Carlson, Esther	Ds.	Irwin
Carr, George H.	Py.	Flandreau
Carr, Walter H.	Me.	Lebanon
<i>Carsrud, Bennie</i>	Sp.	Hartford
<i>Carter, Louis W.</i>	G. Bt.	Doland
Chilcott, Ellery C.	G. Gl.	Brookings
<i>Cheever, Ned</i>	En.	Castlewood
Child, Harry	Cl.	Ashton
<i>Christie, Edward</i>	Cl.	Fredrick
Clevenger, Altha	Pr.	Brookings
Clevenger, John W.	G. Py.	Brookings
Coffin, Henry W.	Py.	Mitchell
Cole, John S.	Me.	Gary
Colegrove, Ina	Ds.	Brookings
Colegrove, Letta	Ds.	Brookings
Colegrove, Lotta	Ds.	Brookings
Colleran, Daniel E.	Py.	Montrose
<i>Collins, Maggie</i>	Pr.	Aurora
Converse, Charles L.	Sp.	Forest City
Converse, Mabelle	Cl.	Forest City
<i>Cool, George Miller</i>	Pr.	Huron
<i>Cornell, Emma L.</i>	Ds.	Brookings
<i>Cornell, Harry</i>	G. Cl.	Brookings
Cotter, Joseph M.	Py.	Dell Rapids
<i>Crane, David A.</i>	Dy.	Brookings

Name.	Major.	Address.
Crane, Frank	Cl.	Brookings
Cranston, Isaiah	Me.	Leslie, Minn
Cranston, Margaret	Ds.	Leslie, Minn
Crawford, E. J.	Se.	Prince, W. Va
Croes, Howard	Pr.	Wessington
Crossman, Arbie B.	Me.	Wessington
Crowley Daniel E.	Py.	Columbia
Cuckow Fred W.	Me.	Dell Rapids
<i>Cuckow, Le Roy E.</i>	Dy.	Dell Rapids
<i>Cuckow, Mattie A.</i>	Ds.	Dell Rapids
<i>Culhane, Lizzie</i>	Ds.	Elkton
Culhane, Michael E.	Me.	Elkton
Cunningham, Bertha	Ds.	Aurora
Curtis, Fred	Me.	Worthing
Curtis Elsie	Ds.	Iroquois
Curtis, Clive	Cl.	Ramona
Danglor, J. S.	Sp.	Madison
Davidson, Margaret L.	Ds.	Davidson
Davidson, Christian O.	Pr.	Lake Preston
Davies, Sarah	Sp.	Brookings
Davies, Mary	Ds.	Brookings
<i>Davis, George E.</i>	Pr.	Forestburg
<i>Davis, Homer</i>	G. Zo.	Marion
Day, Charles R.	Se.	Westport
Deeth, Verna	Ds.	Brookings
De La, J. W. C. H.	Sp.	Houghton
Depeel, T. T. G.	Me.	Bradley
<i>Depeel, Roy</i>	Se.	Bradley
Derung, John A.	Dy.	Ramona
Dibble, Orville C.	Me.	Brookings
Dillman, S. J.	Cl.	Reville
Dillman, Ray	Sp.	Reville
Dodge, Fred E.	Ph.	Brookings
Donahue, Thomas	Pr.	Worthing
Doughty, Mattison	Me.	White
Downing, Anna	Pr.	Brookings



GIRLS' STUDY.

Name.	Major.	Address.
Downing, Edward	Pr.	Brookings
Downing, Mary	Ds.	Brookings
<i>Drake, Ina</i>	Cl.	Ramona
Drew, Christopher H.	Cl.	Highmore
Duden, F. H.	Pr.	Brookings
Dugger, Fred	Py.	Estelline
Du Foe, Lulu	Sp.	Brookings
Dyce, Nellie	Ds.	Coleman
Egeberg, Nora	Ds.	Brookings
Else, Earl	Me.	Doland
Emerson, Carl	Cl.	Toronto
Engbertson, Martin	Se.	Garretson
Ennis, Herbert I.	Ag.	Lebanon
Enos, Winifred	Ds.	Brookings
Erickson, Benjamin	Dy.	Trenton
Erickson, Edward	Dy.	Trenton
Erickson, Hilma	Cl.	Willow Lakes
Erickson, Arthur	Cl.	Willow Lakes
Erstad Carl F.	Sp.	Brookings
Etting, Bessie	Cl.	Brookings
Etting, Maude	Cl.	Brookings
Evans, Lina	Ds.	Aurora
Evenson, John	Cl.	Toronto
Fassett, Clayton M.	Me.	Brookings
Fishback, Myra B.	Ds.	Brookings
Fjerstad, Hans C.	Ag.	Toronto
Findeis, Philip	Ag.	Miranda
Flatten, Oscar	Sp.	Dell Rapids
Fleming, Michael E.	Ag.	Bryant
<i>Foy, Frank</i>	Me.	Naples
<i>Foy, Stanton</i>	Cl.	Naples
Fundaun, Peter	Se.	Baltic
Freng, John	Se.	Volin
Freng, Ole	Se.	Volin
Fry, William	Pr.	Coleman

Name.	Major.	Address.
Gentle, Ralph E.	Cl.	Brookings
Girton, Lee R.	Py.	Madison
Glendenning, Eva	Bt.	Arlington
Glendenning, George H.	Ar.	Arlington
<i>Glomstad, Theodore</i>	Se.	Milbank
Gorseth, Martin	Pr.	Irene
Gray, William H.	Pr.	Meckling
Greenman, W. E.	Cl.	Redfield
Grove, Frank W.	Me.	Brookings
Grinde, Frank	Pr.	Dell Rapids
Grinde, Mike E.	Pr.	Dell Rapids
Gunderson, Charles A.	Sp.	Gem
Hafnor, N. P	Se.	Bath
<i>Hall, George</i>	Cl.	Brookings
<i>Hall, Mamie</i>	Cl.	Brookings
<i>Hall, Roy J.</i>	Pr.	Lake Preston
Hall, Florence	Ds.	De Smet
Halsey, N. M.	Sp.	Parker
<i>Halverson, G. O.</i>	Pr.	Toronto
<i>Hamre, Jens</i>	Cl.	Brookings
Hamre, Oscar	Sp.	Brookings
Hanson, Helmer C.	Pr.	Skjold
<i>Hanten, Bernard</i>	Dy.	Aurora
<i>Hanson, John E.</i>	Sp.	Toronto
<i>Haraldson, Bertha M.</i>	Pr.	Bruce
Haraldson, Betsy	Ds.	Bruce
Harding, Charles J.	Ag.	Britton
<i>Hargis, Christie Elizabeth</i>	Ds.	Brookings
<i>Haium, Oscar</i>	Se.	Elkton
<i>Harkins, Frank E.</i>	Me.	Gary
Harkins, Lilla	G. D. E.	Bozeman, Mont
Harrington, Dudley N.	Cl.	Willow Lakes
Hartwick, Albert	Cl.	Brookings
Hartwick, J. A.	Se.	Brookings
<i>Hartwick, Joseph E.</i>	Pr.	Brookings
Harza, Carl W.	Me.	Brookings

Name.	Major.	Address.
Harza, Roy	Me.	Brookings
<i>Hascall, George Don</i>	Cl.	Lake Preston
<i>Hatfield, Roy Berton</i>	Py.	Huron
Hatlestad, Samuel	Cl.	Estelline
Hatton, John H.	Ag.	Groton
<i>Hatton, William</i>	Ag.	Groton
<i>Hatton, Oscar</i>	Pr.	Groton
<i>Haugen, Joseph</i>	Se.	Baltic
Haugse, Arne	Me.	Dell Rapids
<i>Hanten, Franklin B.</i>	Sp.	White Lake
Hawley, Christ	Cl.	Toronto
<i>Hazle, William Adam</i>	Me.	Lebanon
Hazleton, Fred C.	Dy.	Ernsley
Hazleton, Charles	Pr.	Ernsley
Hedger, Charles L.	Ag.	Burch
Hegeman, Harry	G. Py.	Brookings
Hegeman, Mabel	Ds.	Brookings
Hegeman, Maude	Ds.	Brookings
Hegge, John	Sp.	Dell Rapids
Hendricks, Paul E.	Cl.	Brookings
Hendrickson, Adolph	Se.	Bruce
Hepner, Frank E.	Py.	Brookings
<i>Hermonson, Lewis</i>	Cl.	Brookings
Heston, Charles E.	Me.	Brookings
Hill, Elmer Ernest	Cl.	Willow Lakes
Hinseth, Henry	Me.	Volin
Hinseth, Lena	Cl.	Volin
Hobbs, Viva E.	Cl.	Prairie DuChien, Wis
<i>Hoberg, Nelse Albert</i>	Cl.	Lake Preston
<i>Hodgeson, Ernest</i>	Cl.	Huron
Hodgeson, Herbert H.	Me.	Huron
Hoidal, P. J.	Pr.	Madison
<i>Holcomb, Wilford B.</i>	Me.	Mellette
Holm, Andrew, B.	G. Me.	Brookings
<i>Holm, Edwin A.</i>	Pr.	Brookings
<i>Holm, Lars L.</i>	Sp.	Strand

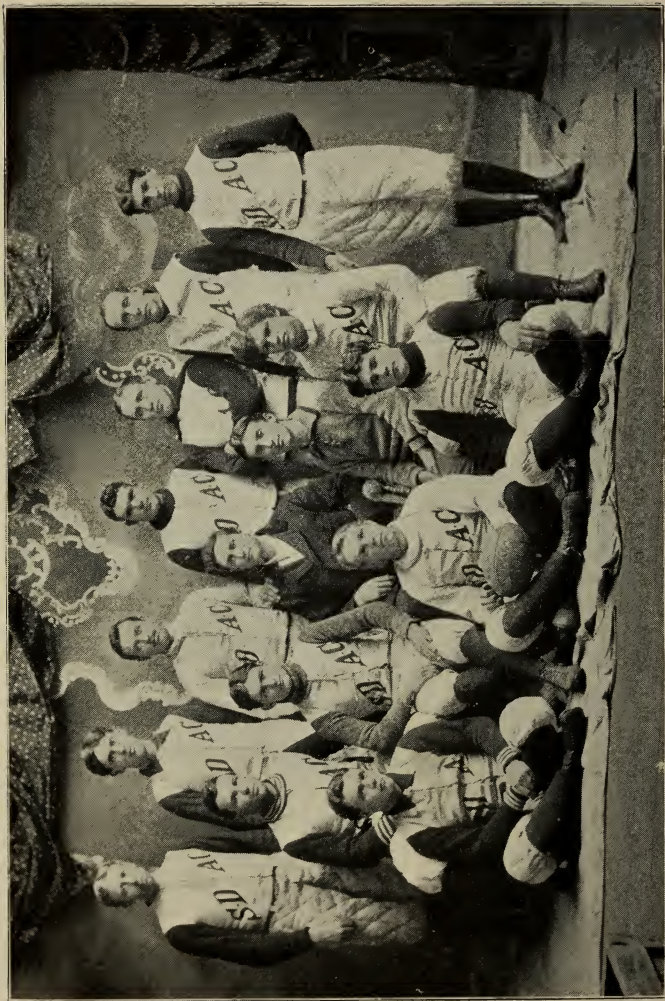
Name.	Major.	Address.
Holsey, Joseph B.	Py.	Canton
<i>Honey, John H.</i>	Sp.	Huffton
Hoover, Franklin R.	Me.	Bradley
Houghton, Ernest	Cl.	Willow Lakes
Hovey, Peter	Dy.	Bruce
<i>Howe, Edward R.</i>	Pr.	Brookings
Hoy, Howard H.	G. Ph.	La Delle
Hubbard, Charles L.	Se.	Clark
Husted Harley H.	G. Mu.	Brookings
Ihde, H. C.	Zo.	Aberdeen
Ibsen, James P.	Dy.	Viborg
<i>Jacobson, Edward</i>	Ag.	Toronto
Jeffrey, George A.	Ch.	Miller
Jenks, Charles, L.	Me.	Madison
Jerde, E. B.	Sp.	Brookings
<i>Jermstad, Eddie</i>	Cl.	Brookings
Jermstad, Alfred	Se.	Brookings
<i>Johnson, Annie</i>	Pr.	Brookings
Johnson, Edith	Cl.	Volga
<i>Johnson, Anna</i>	Cl.	Brookings
<i>Johnson, Charles J.</i>	Ag.	Volga
Johnson, Gina E.	Cl.	Brookings
Johnson, Edward	Me.	Toronto
Johnson, Rhoda	Ds.	Brookings
Johnson, Eda A.	Cl.	Volga
Johnson, Annie J. H.	Ch.	Volga
Johnson, Ole	Se.	Ferney
Johnson, Anton	Se.	Ferney
Johnson, Isaac B.	Ho.	Brookings
Johnson, Ludwig	Cl.	Brookings
<i>Johnson, Charles H.</i>	Pr.	Woonsocket
<i>Johnston, Charles</i>	Pr.	Petrodie
Johnston, Granville	Cl.	Petrodie
<i>Jolley, William G.</i>	Ag.	Ramona
Jones, Robert H.	Py.	Madison

Name.	Major.	Address.
<i>Jones, Frank</i>	Py.	Revillo
Kelly, Anna G.	Pr.	Bushnell
Kendall, C. D.	Py.	Brookings
Kenall, M. Krete.	Ch.	Brookings
Kendall Bert	Dy.	Epiphany
Kendall, L. J.	Cl.	Brookings
Kennedy, C. LeRoy	Me.	Madison
Kirchmer, Eugene H.	Se.	Fountain City, Minn
<i>Kleinsasser, John</i>	Pr.	Bridgewater
Knox, William H.	Ch.	Faulkton
<i>Knudson, Arthur H.</i>	Cl.	Brookings
Korstad, H. H.	G. Ln.	Brookings
<i>Korstad, John</i>	Sp.	Brookings
Kraft, Henry	Sp.	Groton
La Craft, W. C.	Sp.	Clark
<i>Ladieu, Alice</i>	Ds.	Brookings
Ladiou, Maybelle	Ar.	Brookings
Lamb, O. V.	Cl.	Worthing
Lamb, Eva	Pr.	Sioux Falls
Langdon, Lillian	Cl.	Parker
<i>Larson, Alfred B.</i>	Cl.	Flandreau
<i>Larson, Oscar L.</i>	Cl.	Flandreau
Larson, Nels	Se.	Yankton
Larson, Laura	Cl.	Esmond
Lawrence, Clay	Ag.	Woonsocket
Lawrence, Claude	Ag.	Woonsocket
Lawrence, Jessie	Ds.	Woonsocket
Lawrence, Minnie	Ds.	Woonsocket
Lawrence, Rollan	Pr.	Brookings
Lawrence, William H.	Ag.	Woonsocket
<i>Le Claire, Emma</i>	Pr.	Jolley
<i>Ledahl, Henry</i>	Cl.	Lake Preston
Lee, Berton E.	Py.	Brookings
<i>Lee, Edgar C.</i>	Pr.	Brookings
<i>Lee, Isaac</i>	Se.	Sherman

Name.	Major.	Address.
<i>Lentz, Henry</i>	Pr.	White
Leonard, Frank	Ho.	Estelline
Lewis, George N.	Py.	Madison
<i>Lewis, Laura</i>	Cl.	Brookings
<i>Lewis, Lillian L.</i>	Ds.	Brookings
Lien, Edward	Pr.	Volin
Lindsey, Charles F.	Py.	Lake Preston
<i>Lockwood, Bessie B.</i>	Ds.	Brookings
Lotsburg, Mather	Dy.	Yankton
Loucks, Geraldine W.	Ds.	Altruria
Loveland, Addie	Ds.	Brookings
<i>Lunden, John A.</i>	Me.	Brookings
Mann, Edwin E.	Ag.	Okobojo
<i>Martinson, Minnie</i>	Ds.	Spencer, Ia
Martinson, Mary	Ds.	Brookings
<i>Martinson, Theodore</i>	Ag.	Spencer, Ia
<i>Madden, Cassie E.</i>	Ds.	Brookings
<i>Mair, Thomas A.</i>	Dy.	Northville
Marham, Berton	Sa.	Julian
Mason, Nellie	Ds.	Brookings
<i>Mason, Florence</i>	Ar.	Brookings
Mathews, Alice	Ds.	Willow Lakes
Mathews, Harry	Pr.	Willow Lakes
Mathews, Roscoe	Me.	Willow Lakes
<i>Mayland, Mabel C.</i>	G. Lu.	Brookings
<i>Mayland, Cora</i>	Ds.	Brookings
Miller, Mark Hugh	Ho.	Claremont
Milne, Una H.	Cl.	Huron
Maffat, Maud	Sp.	Brookings
Moore, Gamaliel	Cl.	Brookings
Moore, Thomas	Py.	Howard
<i>Moore, Myron M.</i>	Ag.	Willow Lakes
Morgan, Maude	Pr.	Lily
Mork, Theodore	Me.	Brookings
Morris, Ethel	Pr.	Brookings
Morrison, Freda C.	Ds.	De Smet

Name.	Major.	Address.
Morrow, J. A.	Pr.	Spencer, Ia
Munro, Stephen D.	Ag.	Gary
<i>Murphy, Frank</i>	Ag.	Brookings
Murphy, Nona	Sp.	Brookings
McBain, William	Se.	Orland
McDonald, N. D.	Dy.	French Lake
McElmurry, Loretta	Ds.	Brookings
McCormack, Will	Pr.	Egan
McCormack, Alice	Sp.	Egan
<i>McGilvra, Clarence</i>	Dy.	White
McKay, James	Dy.	Huron
<i>McLaren, John W.</i>	Sp.	Vienna
Nachtigal, Isaac	Ag.	Marion
Nicholson, Willie	Pr.	Brookings
<i>Nihart, Samuel</i>	Ag.	Cairo, Neb
Noble, Alonzo	Pr.	Manchester
Noble, Maud	Cl.	Manchester
<i>Norem, James C.</i>	Se.	Beresford
Norgaard, Carrie	Ml.	Laketon
<i>Norton, George J.</i>	Se.	Artesian
<i>Nostrud, A. T.</i>	Se.	Bath
Olsen, Nora	Ds.	Brookings
Olson, Bessie	Cl.	Brookings
<i>Olson, Charles A.</i>	Se.	Sherman
<i>Olson, Ole J.</i>	Sp.	Bryant
Olson, Anna	Cl.	Laurel
<i>Olson, Eva L.</i>	Ds.	Bruce
Olson, Gustava	Ds.	Coleman
Ooien, August J.	Pr.	Prairie Farm
<i>Opdahl, Anna H</i>	Cl.	Volga
<i>Orr, Frank G.</i>	Sp.	Brookings
O'Shea, Michael	Sp.	Gary
O'Shea, Edmond	Dy.	French Lake
Ostroot, Gabriel	Cl.	Brookings
Otter, Mather R.	Dy.	Clark

Name.	Major	Address.
Otterness, Jens M.	Pr.	Brookings
Outton, Frank A.	Py.	Ashton
Paddock, Jay M.	Ag.	Huron
Palmer, Herbert	Cl.	Mellette
Parker, Anna	G. Cl.	Brookings
Parker, Flossie S.	Sp.	Brookings
Parsons, J. P.	Se.	Aurora
Parsons, Harry W.	Se.	Durand, Wis.
Parsons, Thomas S.	G. Bt	Durand, Wis
Parsons, W. M	Pr.	Aurora
<i>Passec, Edward</i>	Pr.	Chandler
<i>Patterson, Eva</i>	Sp.	Brookings
<i>Patterson, John George</i>	Cl.	Brookings
<i>Paulson, Mattie</i>	Cl.	Castalia
Peirce, Esther	Ds.	Brookings
Perry, Jennie	Sp.	White
Peterson, Emma	Ar.	White
Peterson, Willard	Se.	White
<i>Peterson, Osmond</i>	Se.	Brookings
Phillips, Louise	Ds.	Brookings
Phillips, Florence H.	Ds.	Brookings
Pickering, Carrie	Pr.	Volga
Pohlmann, Henry W.	Me.	Huffton
Poole, Guy A.	Cl.	Brookings
Potter, Gertie	Pr.	Reville
Pretzer, Lydia	Sp.	Chamberlain
Pond, Maurice.	Sp.	Brookings
<i>Quail, Carl</i>	Se.	Volga
<i>Quigley, Lura</i>	Sp.	Arlington
Redman, Rose	Sp.	Reville
Reese, Mary.	Pr	Irene
Reitz, Herbert	Pr.	Reville
Reiner, Gustave	Ag.	Huron
<i>Remmington, Alice</i>	Sp.	Brookings



FOOT BALL TEAM.

Name.	Major	Address.
<i>Ribstein, Clark</i>	Cl.	Bruce
<i>Ribstein, Guy</i>	Cl.	Bruce
<i>Rice, Emma</i>	Pr.	Estelline
<i>Ricker, E. B.</i>	Sp.	De Smet
<i>Riemann, Edith F.</i>	Ds.	Albany, N. Y.
<i>Ripley, Frank H.</i>	Ag.	Aurora
<i>Rische, Christopher M.</i>	Pr.	Bruce
<i>Roddle, Ben F.</i>	Cl.	Brookings
<i>Roe, Robert</i>	G. Gl.	Brookings
<i>Ronning, Oscar</i>	Me.	Brookings
<i>Roskie, George W.</i>	Ag.	Montello, Wis
<i>Rottluff, A J.</i>	Pr.	Oldham
<i>Rowley, Walter L.</i>	Se.	Mitchell
<i>Rubendall, Mrs. P. E.</i>	Sp.	Artesian
<i>Rubendall, P. E.</i>	Dy.	Artesian
<i>Ruggles, W. I.</i>	Ag.	Groton
<i>Ryerson, Helen</i>	Ds.	Chamberlain
<i>Rymerson, Hannah</i>	Pr.	Estelline
<i>Sage, Elmer G.</i>	Dy.	Aurora
<i>Salisbury, Emma Maude</i>	Cl.	Ashton
<i>Salisbury, Herbert L.</i>	Dy.	Mellette
<i>Salisbury, Nellie M.</i>	Ds.	Mellette
<i>Sampson, Anna</i>	Ds.	Bruce
<i>Sand, Arthur</i>	Sp.	Flint
<i>Sasse, Carl A.</i>	Ag.	Vienna
<i>Sather, John O.</i>	Cl.	Toronto
<i>Sather, John C.</i>	Pr.	Toronto
<i>Sayre, Frank L.</i>	Se.	Benclare
<i>Schlosser, David</i>	Me.	Marion
<i>Schlosser, Geo. O.</i>	Me.	Marion
<i>Schultz, Jennie</i>	Mu.	Aurora
<i>Schultz, Emma</i>	Ar.	Aurora
<i>Schultz, Theodore</i>	Mu.	Aurora
<i>Schultz, Ernest A.</i>	Me.	White
<i>Seely, Frank A.</i>	Dy.	Garden City
<i>Servold, John</i>	Dy.	Howard

Name.	Major.	Address.
<i>Setbacken, Julius</i>	Me.	Lake Preston
<i>Shaw, William B.</i>	Pr.	Oldham
<i>Sheldon, Henry E.</i>	Dy.	St. Lawrence
<i>Sherwin, Howard H.</i>	Ms.	Brookings
<i>Schriver, Ernest M.</i>	Py.	Dell Rapids
<i>Shuster, John W.</i>	Me.	Florence
<i>Simmons, Pearl</i>	Cl.	Parkston
<i>Simpson, E. E.</i>	Sp.	Brookings
<i>Simpson, Howard</i>	Me.	Sioux Falls
<i>Skinner, Charles H.</i>	Dy.	Brookings
<i>Skinner, Guy</i>	Me.	Brookings
<i>Skinner, May</i>	Ds.	Brookings
<i>Slagle, Mrs. R. L.</i>	Ar.	Brookings
<i>Slocum, William P.</i>	Ag.	Galla
<i>Smith, Ben</i>	Me.	Lennox
<i>Smith, Howard</i>	Py.	Mitchell
<i>Smith, Oscar F.</i>	Me.	Dell Rapids
<i>Smith, William</i>	Ag.	Wilmot
<i>Snell, Ethel Cora</i>	Bt.	Memphis, Neb
<i>Solberg, Caroline</i>	Ds.	Spring Grove, Minn
<i>Somerville, Earl</i>	Se.	Sisseton
<i>Sonstebo, C. G.</i>	Sp.	Bradley
<i>Soreng, Andrew O.</i>	Sp.	Dexter
<i>Sour, William W.</i>	Se.	Hayti
<i>Staven, Melvin J.</i>	Ag.	Brookings
<i>Stearns, Maude</i>	Ds.	Brookings
<i>Stegner, Andrew S.</i>	Pr.	New Grove, Minn
<i>Stegner, William E.</i>	Pr.	New Grove, Minn
<i>Stephens, Everett</i>	Me.	Springfield
<i>Stermer, Laura</i>	Pr.	White
<i>Stermer, Lena</i>	Ds.	White
<i>Stordahl, Jacob A.</i>	Sp.	Jasper, Minn
<i>Strande, Emil T.</i>	Se.	Lake Preston
<i>Strauss, Abe</i>	Cl.	Mountain Lake, Minn.
<i>Stromme, Helen</i>	Ds.	Volga
<i>Sturges, Albert</i>	Se.	Gary

Name.	Major.	Address.
Stuve, Helga	Sp.	Lake Preston
Summerside, Georgia	Ph.	Harold
Swanson, John E.	Cl.	Strandberg
Swanson, Hannah M.	Cl.	Bruce
Swartz, George F.	Py.	Parkston
Taylor, C. DeWitt	Py.	Columbia
Taylor, Frank	Sp.	St. Lawrence
TenEyck, Arthur	Se.	Miller
<i>TenEyck, Fred</i>	Dy.	Miller
Thayer, Carl G.	Pr.	Brookings
Thomas, Maud	Ds.	Mellette
<i>Thomas, John</i>	Sp.	Freeman
<i>Thomas, W. E.</i>	Sp.	Clear Lake
Thompson, Edina	Ds.	Parker
Thompson, Elmo	Ag.	Parker
<i>Thompson, George A.</i>	Cl.	Dell Rapids
<i>Thormodsgaard, Edward N.</i>	Sp.	Moe
Thornber, Adam	Pr.	Iroquois
Thornber, Albert E.	Me.	Iroquois
Thornber, Edith	Ds.	Iroquois
Thornber, Walter S.	G. Ho.	Iroquois
Thornber, William	Ag.	Iroquois
<i>Thorsness, Emma</i>	Pr.	Oldham
Thorston, Sophia	Cl.	Brookings
<i>Torkelson, Halvor</i>	Sp.	Galla
Towne, Judson R.	Bt.	Los Angeles, Cal
Towne, Ralph E.	Ph.	Los Angeles, Cal
<i>Trageser, Peter</i>	Cl.	Gary
<i>Treat, Theodore</i>	Sp.	Myron
Tree, Bert	Sp.	Brookings
Trooien, Ole N.	Ag.	Prairie Farm
Trythall, John	Pr.	Miller
Trythall, W. D.	Me.	Miller
<i>Tufteland, Thomas</i>	Se.	Dell Rapids
Turner, Edward	Se.	Iroquois
Tvedt, Lewis	Dy.	Taopi

Name.	Major.	Address.
<i>Tyler, George</i>	Sp.	Huffton
Udseth, Rudolph J.	Pr.	Prairie Farm
Uppendahl, Will	Se.	White
Urban, Millie	Sp.	Red Lake
<i>Urdahl, George E.</i>	Sp.	Fossum, Minn
Willing, Marion	Dy.	Epiphany
Winegar, Laura	Ds.	Galla
Winters, George W.	Ag.	Forest City
Wold, Knute	Se.	Sherman
Wolfe, William T.	Me.	Clark
Wood, Roscoe	Py.	Doland
<i>Work, Lloyd E.</i>	Me.	White
Wosnuk Theodotus	Cl.	Rosello
Young, Gilbert A.	G. Ph.	Brookings
<i>Young, Grace Mary</i>	Ds.	Brookings
<i>Young, Nora</i>	Mu.	Brookings
Youngberg, Mamie	Cl.	Volga
Youngman, Ruth E.	Ds.	Brookings

MILITARY ROSTER.

Percy E. Trippe, Capt. 10th Cavalry U. S. A., Commandant.

STAFF.

Jay M. Paddock, Acting Major.

Geo. W. Roskie, Acting Adjutant.

Frank Grove, Sergeant Major,

Harley H. Husted, Chief Musician.

INFANTRY.

COMPANY A.

Captain, Jay M. Paddock.

First Lieutenant, Geo. W. Roskie.

Second Lieutenant, Jos. B. Holsey.

*Sergeants, Oscar F. Smith, Michael E. Culhane (color) Berton
E. Lee, Alva Remster, Mattison H. Doughty.*

Trumpeter, Mark H. Miller.

*Corporals, Michael E. Fleming, O. V. Lamb, Stephen Munro,
L. V. Brown, Charles L. Hedger.*

COMPANY B.

Captain, William T. Thornber.

First Lieutenant, Lyman C. Burnett.

Second Lieutenant, Fred Curtis.

*Sergeants, Ralph E. Gentle, Gustave Reimer, Roscoe A. Math-
ews, Isaiah Cranston, Elmer E. Hill.*

Trumpeter, Guy Ribstein.

*Corporals, C. DeWitt Taylor, George D. Schlosser, Jens M.
Otterness. Isaac Johnson, Theodore Mork.*

STUDENT ORGANIZATIONS.

INDUSTRIAL COLLEGIAN.

Clay Lawrence, Editor-in-chief.

George H. West, Business Manager.

ATHLETIC ASSOCIATION.*Clare H. Bullen, President.**George H. Carr, Secretary.***ORATORICAL ASSOCIATION.***Jay L. Beebe, President.**Mabel Hegeman, Secretary.***FIRST REGIMENT BAND.***Harley H. Husted, Leader.**Gilbert A. Young, Manager.***YOUNG MEN'S CHRISTIAN ASSOCIATION.***Howard H. Ainsworth, President.**Charles L. Hedger, Secretary.**Walter S. Thornber, Cor. Sec'y.***YOUNG WOMEN'S CHRISTIAN ASSOCIATION.***Florence L. Ainsworth, President.**Minnie Lawrence, Secretary.**Ina Colegrove, Cor. Sec'y.***LADIES' GLEE CLUB.***Maude Hegeman, President.**Nellie Mason, Secretary.***MEN'S GLEE CLUB.***Ray Dillman, President.**Charles F. Lindsey, Secretary.***ATHENIAN LITERARY SOCIETY.***Hans C. Fjerestad, President.**Elsie Curtis, Secretary.***MILTONIAN LITERARY SOCIETY.***Stephen Munro, President.**Esther Peirce, Secretary.***STEAM ENGINEERS' SOCIETY.***Eugene Kirchner, President.**Orbra Bowman, Secretary.*

PART II.

A—GENERAL INFORMATION.

1. **ESTABLISHMENT**—An act of Congress approved July 2nd, 1863, gave to each state 30,000 acres of public lands for each representative in congress for "the endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts." In compliance with this act the territorial legislature of 1881 passed an act establishing an agricultural college at Brookings in the territory of Dakota.

The legislature of 1883 provided for the erection of the first building. This building, now known as the central building, was built in 1884.

Upon the division of the territory of Dakota into the states of North and South Dakota when admitted into the Union in 1889, the agricultural and mechanical college of Dakota became known as the South Dakota Agricultural College.

2. **PURPOSE**.—The college is devoted to advancing the interests of practical education and its purpose is to give men and women such training as will best fit them for the active duties of life, whether it be in the fields, the shops, the house, or in the class or counting rooms.

In the act of the legislature establishing the institution it was designated "The Agricultural and Mechanical College" and in the Congressional Act these colleges were spoken of as "of Agricultural and the Mechanic Arts," and while the school is popularly called the "Agricultural College" the mere precedence of the term does not make it more agricultural than mechanical. While the work of the institution is largely scientific it is of such a diversified character that it makes the student feel that he can pursue work along almost any line which his tastes dictate. The aim of all the work offered is to fit young people to be able to occupy more acceptably, any position they may be called upon to fill, than they could without such training; and to make better

and more intelligent citizens. It also aims to reach, and educate as best it can, the masses of the people of the state. Where there is an earnest desire on the part of the people of a community to get hold of new ideas, the college is ready and glad to do all it can toward supplying the want.

3. LOCATION—The South Dakota Agricultural College is, located in the east central part of the state, upon an eminence one mile from the business center of the city of Brookings and four miles from the Big Sioux River.

Brookings has a population of nearly two thousand thrifty intelligent and hospitable people. Its streets are lined with trees and there are very few houses where there are not well kept lawns, upon which are growing trees, beautiful flowering shrubs and plants. It has often been called the "city of homes."

It is a city of clean morals. No saloon has been allowed within its limits for several years. In the spring election in 1898 the proposition to allow saloons within the city limits was defeated by a vote of three to one. While in the general election of 1896 Brookings county was the banner county of the state in its vote against allowing intoxicating liquors to be sold in the state.

It is situated on the Central Dakota division of the Chicago & Northwestern Railway and three miles from its junction with the Watertown branch of the same road which makes connections with the main line at this point.

4. SOURCES OF INCOME.—By the Congressional Act under which South Dakota became a state, one hundred and sixty thousand acres of land were set aside as an endowment for the South Dakota Agricultural College. These lands are not quite all selected and none have as yet been sold. A small amount is now being received yearly as rental from the selected lands.

No school lands can be sold for less than ten dollars per acre so that when these lands are all sold it will give an endowment of probably close to two million dollars, the interest from which will be sufficient for the needs of the college.

The "Morrill Act" passed by congress in 1890 provides a yearly appropriation for "the more complete endowment and



MODEL DINING ROOM.

support of colleges for the benefit of Agriculture and the Mechanic Arts." Under this act the college receives from the general government \$15,000 for the first year, \$16,000 for the second, \$17,000 for the third and so on until the annual amount reaches and remains at \$25,000 during the pleasure of congress.

The Hatch Act passed by Congress provides for the establishment of Agricultural Experiment stations in connection with Agricultural Colleges and allows \$15,000 per year for the maintenance of the same.

The state bi-yearly makes appropriations for the various state institutions. The last legislature appropriated for the South Dakota Agricultural College the sum of \$28,000.

5. PLAN OF ORGANIZATION.—The work of the institution is conducted in twenty-four departments—the heads of which report directly to the President who is responsible to the Regents for the whole work of the college. The head of each department is responsible to the president for the work of his department.

In case of any contingency arising by which the regular teaching force of any department is insufficient to do the work a competent student assistant is provided. Tutors, to assist in bringing up back work and helping weak students, are appointed from the student body and paid by the student, but the tutor is at all times under the superintendence of the head of that department who shall determine whether a tutor is needed or not.

The president is in charge of all matters of administration and in his absence the chairman of the Executive Committee or the ranking member of that committee present will act in his place. The president is the proper person to address for information of any nature.

6. GENERAL POLICY—It is the policy of the institution to make itself in truth a part of the common school system—first by continuing the work of the young people, from the point in their education where the lower school stops, thus giving them an opportunity to become liberally and practically educated within the boundaries of their own state,—second to assist in the training of public school teachers, especially in the various sciences.

The college also desires to assist, as far as its resources will allow, in the self improvement at their homes, of the people in the state. To this end where half a score or more of intelligent persons express a desire to study along some definite line, they will be advised as to the course of reading to pursue, and, if possible, be furnished a lecturer for one or more lectures after such reading has been faithfully completed. It is believed that this is a more systematic, logical and effective method of outside instruction than promiscuous farmers' institutes where as a rule the attendance is largely made up of those who have no especial preparation and are present solely to be entertained.

In all cases the college makes its best efforts to impart information whether it be by means of its publications, its instructors or its correspondence.

7. EXPERIMENT STATION.—This department is organized under the Hatch Act of Congress which appropriates fifteen thousand dollars from the United States treasury each year for its maintenance. "It shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals"—enumerating some twenty other lines of research—"and such other experiments bearing directly on the Agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states—To aid in acquiring and diffusing among the people of the United States, useful and practical information on the subjects connected with Agriculture." The South Dakota station conducts its investigations principally along the following lines: live-stock, soils, field experiments, green house work, tree and small fruits, chemistry of plant growth and foods, and economic botany, entomology and zoology.

In planning the work of the station the main object sought is to assist the agricultural interests of the state. Education from the work comes in two ways, first by the student's observation of the actual work, second by reading the accounts and results of the work which are published in the form of bulletins and are available to any one applying.

B—EQUIPMENT.

1. **CAMPUS.**—The College Campus of thirty acres is beautifully located on an eminence within the corporate limits of Brookings. Under charge of the Horticultural department the campus, ornamented with a choice and tasty variety of trees and shrubs and laid out with the necessary drives and walks, is a good example of landscape gardening. Adjoining on the rear is a fifty acre plat which is devoted to the Horticultural Gardens and the United States forestry experiments.

This portion is laid out regularly in suitably sized plats with longitudinal streets at appropriate distances apart, thus giving a beautiful and symmetrical effect to the observer from the college building.

2. **BUILDINGS.**—The oldest building on the campus known as the "Central Building" was completed in 1884. It is constructed of brick and stone and is devoted entirely to administrative and instructional purposes. The basement contains a boys' study and toilet rooms, "Collegian" and Y. M. C. A. offices and two class rooms, besides several other offices and rooms. On the first floor are the administrative offices, the library, faculty room and one class room. The second floor accommodates the Commercial department, three rooms; the mathematical department, two rooms, and one large lecture room. The department of Chemistry and Pharmacy occupy the third and upper floor.

The South Building, the next one on the campus, is a three story brick and stone building devoted to the experiment station work and to the departments of Botany and Zoology. In the basement and on the first floor are the various stations, laboratories and offices. On the second floor is the Botanical class room, herbarium and laboratory. On the upper floor is located the department of Zoology with its various laboratories, class rooms and offices.

The North building completed in 1888, is a four story brick building. The basement is used for a girls' study and retiring rooms and for the department of Physics consisting of laboratories, lecture, apparatus, office and dark rooms. The first floor is given

up entirely to an assembly room, seating about four hundred people. The second floor is given up to the departments of Art and Music with the various drawing, offices and practice rooms and studios. The Domestic Science department occupies the third floor with its large sewing, cooking and dining rooms and kitchen. A hall in the attic is given up to Physical Culture. The girls' cottage is described under "4."

The Horticultural building is a one story building of brick and wood in which are the laboratories, class rooms and offices of the department. The green and forcing houses are adjoining.

The Mechanical Hall recently completed is a two story brick building containing the various shops, drawing, lecture and office rooms of the Mechanical Engineering department.

The old wood shop, a one story building, has been converted into a gymnasium and drill hall, and although inadequate, does much better than none.

3. FARM.—Set apart as the college farm is a tract of three hundred and twenty acres near the campus, about fifty acres of which is used by the United States Experiment Station as an experimental farm. Here the field experiments with field crops, seed germination and soil preparation are conducted and the student electing it can witness and actually participate in this scientific work. The remainder of the farm is carried on as a model stock and dairy farm under the direction of the Professor of Animal husbandry. Practical work and experiments involving the best farming practice for this region are given the students.

4. DORMITORIES.—Originally the institution provided dormitories for both sexes but the demands for instructional purposes have increased so much more rapidly than the state has furnished means for new buildings, it has been necessary to convert the dormitories into rooms for the departments so that now the college undertakes to furnish quarters for about twenty young ladies in what is known as the "Girls' Cottage," a two story wooden building situated just west of the campus. The rooms are large, pleasantly situated, conveniently arranged and heated with hot water and hot air systems.

5. LABORATORIES—The work done by the institution is so largely scientific in its nature that in order to use the most modern and approved methods it is necessary to provide laboratories for a large majority of the different departments.

The farm with its various well planned and stocked barns serves as one very practical laboratory for the department of Agriculture. The soils are physically and chemically studied in other separate laboratories. The green house and horticultural gardens serve in a like capacity for the Horticultural department. The Biological departments are each provided with adequate laboratories and necessary auxiliary rooms on the upper floors of the south building. The chemical laboratory and offices of the experiment station occupy the larger part of the first floor of the same building. On the top floor of the central building is located the entire instructional departments of Chemistry and Pharmacy including a general qualitative laboratory and equipments sufficient for one hundred students, a quantitative laboratory which accommodates twenty-five students, a pharmaceutical laboratory for twenty students and the necessary apparatus, store and weighing rooms. On the second floor of the same building is the actual business practice rooms for the Commercial department. On the upper floor of the north building the Domestic Science department is provided with a large kitchen, sewing room, model dining room and pantry, sufficient for the accommodation of seventy-five students. The second floor is divided into apartments for the Art and Music departments. In the basement are the general and advanced Physical laboratories with their necessary stock, apparatus and dark rooms. The mechanical laboratories are in the new mechanical building including a machine shop equipped for twenty students, a wood shop equipped for thirty students, a forge shop equipped for twenty students, a drawing room equipped for thirty-six students. The Astronomical observatory serves as a laboratory for the Mathematical department.

6. LIBRARY AND READING ROOM.—The library occupies rooms on the first floor of the central building and contains about five thousand bound volumes and half as many pamphlets. The in-

stitution being a repository for the Government, it contains quite a number of governmental publications. Care has been exercised in the selection of books in order that each department may have proper books of reference at the disposal of the students taking work in that line. The card system of cataloging is used, thus facilitating the use of the library. The reference portion is well supplied with proper books of reference. The files of all the standard, scientific and literary magazines are kept bound. The reading room portion is supplied with the leading periodicals and newspapers. The library is nearly all the time, day and evening, at the disposal of the student for purposes of study and reading.

7. OFFICES.—The president's and registrar's offices are on the first floor of the central building and at the left of the main hall. The secretary of the faculty's office and general faculty room are entered from the end of the main hall. The secretary's and business office is at the end of the same hall. Nearly all the heads of departments are provided with offices in connection with their departments.

8. LECTURE AND CLASS ROOMS.—The class rooms are fitted to accommodate from thirty to fifty students each. Lecture rooms are fitted with arm rest chairs for ease in taking notes. The main lecture or assembly room is provided with opera chairs for seating about four hundred and a fine electric dissolving projection lantern for illustrative purposes.

9. MUSEUMS.—The idea that museums are valuable as educational factors, only as they furnish illustrative material for study, has obtained in the collection of the various specimens and their arrangement in the several department museums. The Zoological, Botanical, Geological, Art and Engineering departments have made especially good beginnings in getting together material for this purpose. Constant additions are being made, thereby increasing their worth as adjuncts to laboratory work. The different collections are now kept in the departments to which they belong. Permanent and commodious rooms for

the museums are projected and it is hoped they will materialize in the near future.

10. GENERAL STUDY ROOM.—A general study room for the young ladies in conjunction with the necessary retiring rooms and toilet facilities, occupies part of the basement of the north building. The ladies of Brookings have very generously furnished part of the fittings necessary to its homelike appearance. The young gentlemen are also provided with similar rooms in the basement of the central building. The institution furnishes first class postal facilities in each of these rooms.

11. SANITARY CONDITIONS.—Recently efforts have been directed to improving the sanitary conditions about the campus. The old methods have been superseded by sanitary plumbing throughout the buildings and a new sewerage disposal plant. The water supply is of the very best, the water being of good quality and very pure. The rarity of zymotic and infectious diseases during the past year is a good proof that the sanitary conditions are excellent.

12. HEATING.—Good heating arrangements are a necessity in almost any climate but in a cold climate their importance increases. The main buildings are all heated with steam generated in a central heating plant. This plant also furnishes steam for running the machinery in the shop and generating electricity for lighting. Largely for purposes of cheerfulness and ventilation fireplaces are provided in nearly all offices.

13. LIGHTING.—The college owns and controls its own electric light plant, thus making the light at all times available and economical. Many of the rooms and all laboratories are provided with gas, which for purposes of illumination is used in Wellsbach burners making a very brilliant light.

14. GYMNASIUM.—Since the mechanical building has been erected one of the frame structures previously used as a wood shop has been converted into a gymnasium. While lacking many of the essentials, nevertheless it offers a fair place of training for those desiring athletic exercise or those who wish to fit

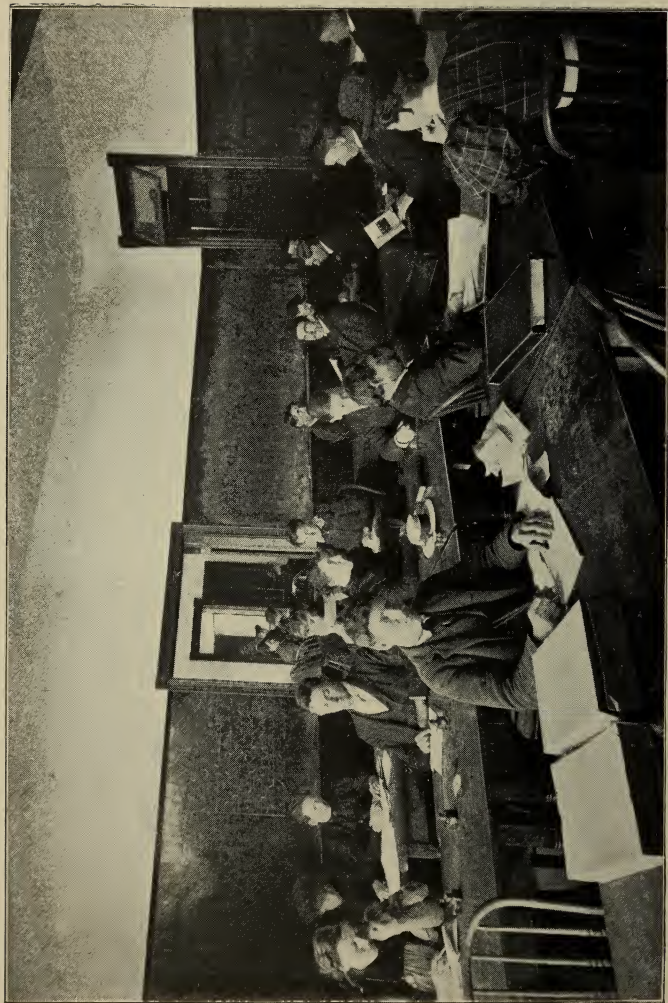
themselves to enter athletic contests. The room also serves as a drill hall and head quarters for the Military department.

A hall on the upper floor of the north building is used for the work in Physical Culture.

C.—ADMINISTRATION.

1. GOVERNING BOARD.—By an act of the legislature approved March 10th. 1897, provision was made for the appointment of "The Regents of Education" to have in charge all the educational institutions of the state.

The law is "The governor by and with the consent of the senate shall appoint five persons of probity and wisdom from among the best and best known citizens, residents of different portions of the state, none of whom shall reside in the counties in which any of the state educational institutions are located, who shall constitute a board to be designated the regents of education." The terms of office of these regents, when first appointed, are of different lengths and after the first terms are each six years thus making it a continuous body. Vacancies are filled by the governor during recesses of the senate. "The board shall organize by electing one of their number president and by the election of a secretary. Thus qualified and organized they shall have authority to make such rules as are necessary for their own government as a board and shall immediately assume the exclusive control and management of all the educational institutions which are maintained either wholly or in part by the state." Along this line the powers and duties of the regents are defined, among which important ones may be mentioned, to employ or dismiss members of the different faculties and other agents, to determine the proper number of teachers in said faculties, also their compensation and term of employment, to establish departments, to settle upon courses of study, to determine the rules to be enacted for the government of the students, to decide upon text books to be used, to fix tuition fees, to guard against unwise duplication of departments, to confer degrees, to control the United States



LECTURE ROOM.

experiment station, and to promote education among the farmers by providing for institutes, in fact to make all regulations as to the executive and instructional functions of the educational institutions of the state. The regents govern the college largely through a regent committeeman.

3. **FACULTY.**—The faculty consists of the president and professors who are elected by the regents and who are responsible to them through the president of the college for the conduct of their work. The different members of the faculty are the heads of the departments of instruction which they represent. Their collective work as a faculty is done largely through the various faculty committees. The supervision of the whole faculty is in the hands of the president who designates the different committees, their chairmen and members, and maps out the work for all, referring special matters to the proper committee. The faculty committees for the year beginning July 1st, 1898 will be as follows, viz: Admission and Credits, Athletics, College Extension and Articulation, Department, Executive, Library and Reading Room, Literary Affairs, Living Arrangements of Students, Social Affairs, Students' Advisory, Student Labor.

4. **DEPARTMENTS.**—The educational and experimental work is performed by the following departments, the heads of which are responsible to the president of the college for the work done in their individual departments. Each department will usually, hereinafter, be known by the abbreviation affixed. The work and equipment of each is described in detail under part III.

DEPARTMENTS.

ABBREVIATIONS.

Agriculture	Ag.
Architectural and Agricultural Engineering.....	Ae.
Botany	Bt.
Chemistry.....	Ch.
Commercial	Cl.
Dairying	Dy.
Domestic Science.....	Ds.
English.....	Eh.
Economics and Philosophy.....	Ec.

Experiment Station	Ex.
Geology and Agronomy	Gl.
History	Hi.
Horticulture	Ho.
Languages	Ln.
Mathematics	Ms.
Mechanical Engineering	Me.
Military	Mi.
Music and Physical Culture	Mu.
Pharmacy	Py.
Physics	Ph.
Preparatory	Pr.
Steam Engineering	Se.
Zoology	Zo.

5. TERMS AND VACATIONS—The college year is divided into quarters of ten weeks each and six days of work of six hours each are done per week. Quarters II., III. and IV. are the important ones for consecutive college work. The work offered in quarter I. is largely a duplication of some of the work done in the other three quarters and is designed

First:—To give students who cannot attend school at any other time or season of the year, an opportunity to avail themselves, to some extent, of the privileges of the college.

Second:—As a short preparatory course for those desiring to enter regular college work in the succeeding term.

Third:—As a fitting course for teachers proposing to take examinations for first grade and state certificates.

Fourth:—For making up required work of irregular and special students who wish to become candidates for degrees.

Fifth:—For the removal of conditions incurred by students during the preceding year.

Every regular student should make an effort to be present the last three quarters of the year. By increasing the number of days per week to six and slightly reducing the day's work it is thought more and better work can be done in three quarters than was formerly done in the college year. It also materially reduces the living cost and puts more time for labor at the disposal

of self-supporting students. The principal vacations are of five weeks each in December-January and June-July.

6. INTERNAL GOVERNMENT.—The faculty determines the general internal policy of the college. In the matter of students' control at the college the widest latitude consistent with good work, good order and good moral atmosphere is allowed. Students, especially those wearing the uniform of the cadet, are expected to conduct themselves at all times in a manner which will reflect credit upon themselves and the institution they represent. Any student of the college who flagrantly shows disrespect for order, morality, personal honor and the rights of others will promptly have his relationship with the college severed.

7. RELIGIOUS EXERCISES.—Attendance on no religious exercises is required. The Young Men's and Young Women's Christian Associations are important elements in retaining a strong christian fellowship among the student body. Their relations to the State and Inter-National organizations assist in keeping the college in touch with other educational institutions. Instead of holding chapel exercises and requiring attendance these student organizations are allowed to take the religious lead by holding prayer and devotional meetings nearly every day to which all are invited.

8. STUDENT AFFAIRS.—Students are allowed wide latitude in carrying on affairs which vitally concern themselves, such as athletic, literary, musical and social organizations. The faculty, in all these matters, retains an advisory interest and aims to assist the students in every way possible in making these elements especially helpful to the student body as a whole. In the matter of social enjoyments the faculty is disposed to allow a reasonable amount of time for recreation and endeavors to contribute as far as possible toward making the students happy and contented.

9. REQUIRED EXERCISES.—There are certain requirements in the way of work exacted of every student, among which are military exercises, physical culture and rhetoricals. These subjects are thought to be of sufficient importance that every student can take them with profit.

10. STUDENTS' LIVING ARRANGEMENTS.—The faculty maintains the right to pass upon the living arrangements of every non-resident student, so that all should report at once to the president.

11. DEPARTMENT.—The chief end of school life being to obtain thorough mental and moral discipline, it becomes incumbent upon the faculty to make the conditions as far as possible conducive to that attainment. No set of regulations are expected to cover every contingency arising but it is necessary that all students recognize the fitness and importance of such restraints as are in force and co-operate in securing their observance. In the absence of any rule applying, the student's own good judgment should suggest the proper procedure. (Department is more fully treated under D.)

12. TUTORING.—Students entering late or otherwise being unable to keep up with the work of their class will at the suggestion of the head of the department, arrange with a regular tutor of that department for assistance.

13. COLLEGE DAYS.—The last Friday of quarters II and IV are known as college days. A cordial invitation is extended to the people of the state to be present and inspect the college on these days, and all connected with the institution are supposed to do all in their power toward entertaining visitors. At these times seeding or harvesting is over and one day spent in inspecting the institution cannot fail to benefit any farmer, mechanic, or merchant. At these times efforts will be made to get reduced rates on all railroads in the state for those wishing to attend.

D.—SPECIAL INFORMATION FOR STUDENTS.

1. GENERAL CONDITIONS OF ADMISSION.—The candidate for admission to the college must be at least fourteen years old and of



IN THE FORCING HOUSE.

good moral character. Students will be admitted regularly as follows, viz:

First. Those who have satisfactorily completed the work of the preparatory department.

Second. Those who have properly completed that work in any other reputable institution and present evidence to that effect.

Third. Those who pass examinations in that work at the college.

Students applying for entrance to the preparatory department must present evidence that they have completed the work of the public schools as far as the ninth grade.

2. TIME OF ENTRANCE EXAMINATIONS.—The Friday immediately before opening the quarter will be devoted to examining students applying for admission both to the college and the preparatory department.

3. ADMISSION FROM OTHER INSTITUTIONS.—Students will be admitted to the college upon certificate from other reputable institutions, provided it shows:

First. The student was honorably dismissed from that institution.

Second. The student has completed creditably the work for which he requests credit.

ENTRANCE CONDITIONS.—A student may be admitted to the college not having passed in one or two of his entrance studies. These shall stand against him and must be cleared up within one year after entrance or the student will be required to take the subject or subjects with the preparatory class.

5. ADVANCED STANDING.—Students entering in advance must present grades from some reputable institution showing that they have satisfactorily completed the work for which they ask credit or submit to an examination on that work at the college. Every candidate for advanced standing must present evidence of having satisfactorily completed the work of the preparatory department.

6. CREDITS FROM ENTRANCE SUBJECTS.—If a student has passed in all his entrance subjects, he will be allowed to take examinations on any subject offered, if there are no prerequisites which shall bar him, and passing in such subjects shall receive due credit therefor.

7. SPECIAL STUDENTS.—Any student, not a candidate for a degree, may take any work offered at the time specified after having satisfied its prerequisites. Students of partial courses for which no degree is offered will be known as Special Students in that work and may receive a certificate of proficiency in accordance with the conditions under which the work is completed.

8. METHOD OF REGISTRATION.—First. Of new students in preparatory department. The student must first present evidence of having completed the work necessary for entering upon the preparatory work to the person in charge. If satisfactory he will be furnished a blank request which he must properly fill out and get that person to stamp. This request he will then take to the secretary of the college and upon payment of the quarterly fees it will be stamped by him after which, upon presentation to the Registrar, it will be exchanged for a card of registration specifying the classes the student is to attend. This card must be presented to each instructor, the last one taking it up and returning it to the Registrar where it will remain until the end of the term.

Second. Of new students of the college. The candidate must present evidence of having completed the required work for admission to the president or chairman of the committee on admission. If found to be satisfactory, the president or chairman of the committee will stamp his properly filled out application which the candidate will take to the secretary, who, after payment of the quarterly fees will stamp it, He may then exchange it with the Registrar for a card of registration which will admit him to his classes.

Third. Of old students. The student having once registered in the college will fill out a blank application to take preferred courses which are offered that quarter, then with the stamp of the secretary of the college he will present it with his registration

card to the Registrar who will punch the work in the card and take up the application. The registration card properly punched will admit the student to classes as before.

9. **ENROLLMENT IN CLASSES.**—Students will present their registration cards to the teacher of each of the classes in which they have registered who will check the card and take the names of the students for his class roll. The last teacher will take up the cards and return them to the office where they will remain until the grades for that term have been punched.

10. **GRADES.**—All grades are reported and recorded in four classes. "A," which represents in the scale of 100 from 90 to 100; "B," from 80 to 90; "C," from 70 to 80; "D," all below 70.

"C" is the lowest grade. Students having a term grade "A" are excused from any final examination with their class.

Grades are reported to students and to the Registrar by grade letters only.

11. **CHANGE OF STUDIES.**—If a student has grave reasons for wishing to change a study not later than two weeks after the beginning of the quarter he may do so only upon permission of the students' advisory committee after submitting a complete written statement of the facts in the case. In such a case he must take the permission of the committee to the Registrar who shall register him in the new subject but the old subject will stand as having been taken and not passed.

CHANGE OF MAJOR OR MINOR SUBJECTS.—Students wishing to make a change in major or minor subjects may make application in writing to the students' advisory committee, for new major or minor subject as the case may be, in which, if the request be granted, he must take the required number of courses without reference to any work he may have done under the old arrangement and he shall not receive credit for any work done under the old selection except as he may substitute for general electives.

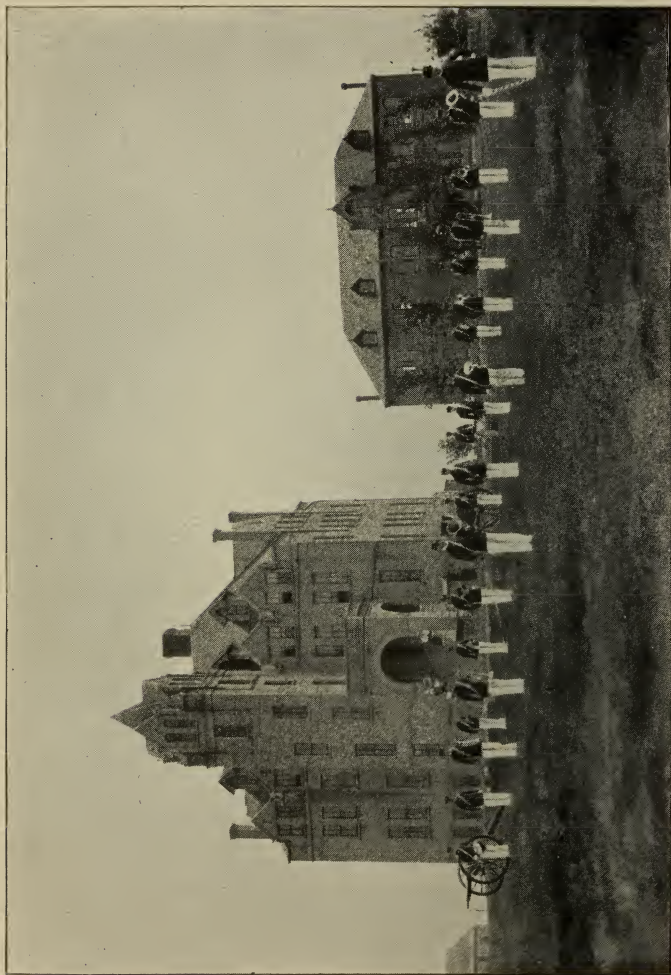
13. **AMOUNT OF WORK.**—No regular student will be allowed to take more than four or less than two full courses in one quarter.

14. LEAVE OF ABSENCE.—For weighty reasons any student having no conditions may after registering for the quarter's work make application to the students' advisory committee for leave of absence. If the reasons seem to that committee to be sufficient the student may receive a leave to be absent a period not to exceed five weeks and by doing the amount of work prescribed by his instructors during said leave of absence he may be able to complete the work in which he has registered. No student shall be granted a leave of absence for a period of more than seven weeks in any three quarters of one college year.

Every student severing his connection with the institution should get a certificate of honorable dismissal.

15. DEPORTMENT.—Every student is allowed the fullest freedom of conscience and is supposed to have well grounded habits of politeness, industry, punctuality and integrity; but in order that the faculty may deal justly with any exceptional cases the following regulations are in force. Upon entering the college and at the beginning of each quarter the student shall receive 100 deportment credits. Each unexcused absence shall be one discredit as also any improper conduct noted and reported by any instructor, although said instructor shall have discretion to inflict punishment in any number of tenths not exceeding one discredit which shall be known as demerits. The number of credits a student has at the end of any quarter or at the time of severing his connection with the institution determines his grade in deportment the same as in a study. Should the number fall below eighty the student will be considered upon probation and if of age will be notified of the fact, otherwise his parents or guardian. Should his credits fall below seventy the student will be suspended for the remainder of the quarter. Discredits will not be recorded until Tuesday noon for the preceding week. Only in rare cases will excuses be granted for recorded discredits.

16. COURSE DEFINED.—A course (a) is a six hour per week lecture or text book study for one quarter, or (b) a twelve hour per week laboratory or practicum study for one quarter; or a combination of the two when it shall be designated as a small a, b, course. A half course is one half the above.



COLLEGE BAND.

17. DEGREES.—The only complete Baccalaureate degree offered is that of Bachelor of Science. Students completing the prescribed work in Pharmacy will be given Pharmacy graduates degrees.

18. REQUIREMENTS FOR B. S. DEGREE.—The candidate must be at least eighteen years of age, have spent at least one year in study at the college and present fifty-two properly completed courses according to the requirements in 19, also one disquisition appropriate length on some subject connected with his "Major", any part of which the faculty may require him to deliver in public. The "Major" will in all cases be mentioned in the diploma.

19. REQUIRED COURSES.—

Six courses in Mathematics.

Seven courses in English.

Two courses in Military.

Three courses in Physics.

Two courses in Chemistry.

Three courses in Practicums.

Two courses in Botany.

One and a half courses in Zoology.

Six courses in some language other than English.

Four courses in History.

Two courses in Economics.

One and a half courses in Geology.

One course in descriptive Astronomy.

ELECTIVES.—

Six courses in Major subject.

Three courses in Minor subject.

Two courses in General Electives.

Not more than six-elevenths of the elective courses may be laboratory work.

20 REQUIREMENTS FOR MASTER'S DEGREE.—For the Master's degree the graduate student must pursue study along a line in which he can offer not less than six courses of undergraduate work, for at least two years, one of which must be resident work.

He must also present fifty copies of a printed thesis of appropriate length, giving the results of his investigation, to the college.

21. REQUIREMENTS FOR PHARMACY GRADUATES.—Upon the completion of Ms. 1, 2 & 3, Eh. 1, 2 & 3, Ph. 1 & 2, Ar. 1, Bt. 1, 2, 5 & 6, Ch. 1, 2, 3 & 4, Zo. 1, 2 & 3, and Py. 1, 2, 3, 4, 5, 6, 7, 8, 9 & 10 the student will be given the degree of Pharmacy Graduate.

22. MAJOR AND MINOR SUBJECTS.—As will be seen in 19 candidates for B. S. degree are allowed to elect six courses from any department in which that number is offered and three courses from any other one department. These will be known respectively as Major and Minor subjects.

23. HONORS.—The candidate for graduation presenting forty of his fifty-two required courses including all those of his major subject of grade "A" and his department for every quarter of grade "A" with no grade in any subject taken below "B" shall receive his diploma marked "Graduated with Honor."

24. SCHOLARSHIPS.—The following article from the law defining powers and duties of the Regents of Education is self-explanatory. "The Regents of Education shall fix all rates of tuition and of other fees to be paid by students, but such rates must be the same in all the different institutions. They may receive free of tuition two students appointed by each senator and one by each representative of the state legislature in any one of the institutions under their control; provided that the period for which appointment was made shall expire with the term of office of said senator or representative and provided that such appointees shall be residents of the district or county whose senator or representative makes the appointment; and provided further, that such appointees shall comply with all the rules and requirements of the institution which they desire to enter. No student, however, shall receive any other gratuity whatever."

The Regents of education makes this article operative in the case of this institution.

25. PRIZES—As an incentive to better work in Elocution and Oratory the president of the college offers two suitable prizes. One to the person in the Elocution class standing first in the final contest with a declamation and one to the person in the Oratory class standing first in the final contest with an original oration. The two students having the highest grades in Elocution for quarter II and two other students of the same class having highest grades for quarter III will be the final contestants in Elocution. The two students having highest grades in Oratory for quarter II and two other students having highest grades in the same class for quarter III will be the final contestants in Oratory. These are the eight final competitors who will compete for the above mentioned prizes the last Friday evening of quarter III.

26. CO-EDUCATION.—Recognizing the value of industrial training as a feature of a practical institution for the masses, the college authorities have provided the various shops and laboratories in which the young men of the state may become familiar with the use of the different tools required in the principal mechanical industries. These special facilities are not confined to the young men but special departments such as Domestic Science, Art and Music have been established so that the young lady students may have opportunities to fit themselves for a keener appreciation of the realities and enjoyments of life in the home, the school room, the store, the office or the factory.

The young woman will profit as much by the introduction of rational methods into her education as the young man and while the shops, studios and laboratories may be used in some instances by the young man and in others by the young woman they are all open to both and in most cases students of both sexes will be seen working side by side. Instead of military drill the young lady students are required to take a definite amount of physical training mentioned in 35.

27. SELECTION OF INDIVIDUAL WORK.—Students of the college should carefully study Part III of this catalog not only with a view of selecting such work as will coincide with their

wants and tastes but that which is consistent and in accordance with the schedule and prerequisites. It is advisable that the student consult with the advisory committee of the faculty in any matters of work or personal perplexity. This advice and careful consideration on the part of the student will enable him to judiciously plan his work for the whole college course.

28. ATTENDANCE.—Attendance on all exercises of the college, including all the classes for which the student is registered, is strictly required. Excuses for absences on account of sickness or other equally important causes may be obtained but all such excuses for any week should be obtained before Tuesday noon of the following week as then the absences are recorded and no excuse will be granted except in case where the student can show the impossibility of getting an excuse before. Where the student obtains such excuses he must invariably make up such work as he may lose by reason of his absence. Absences at the beginning or end of terms and immediately preceding and succeeding holidays are regarded very important and ordinarily will not be excused. The method of dealing with unexcused absences is more fully set forth in D 15.

29. ASSEMBLY.—No student is compelled to attend any religious exercises, but inasmuch as a congregation of all the students as often as once a week is desirable for social and economic reasons, on every Wednesday "Assembly" is held in the chapel, attendance upon which is required of every student and expected of every instructor. Usually an entertaining program is rendered consisting of an address by some competent person, a short news review of the week by one of the students, and announcements for the following week interspersed with music, thus making this general exercise not only instructive but an entertaining feature of college life.

30. EXAMINATIONS.—Final examinations are held in each study during the last two or three regular periods assigned to each course in the quarter. The character and scope of such examinations are almost entirely at the option of the instructor but the final "grade" for each specific course of which this ex-

amination is an element will at the end of the quarter be made up by the teacher and reported to the registrar's office. From time to time during the quarter written reviews and recitations will be held with or without notice to the student at the discretion of the instructor. Failure to attend an examination, unless prevented by illness or serious necessity, or any attempt by the student to use illegitimate methods is regarded by the faculty as a very grave offense and will be dealt with as such.

31. DETERMINATION OF FINAL GRADE.—Ordinarily twice the recitation grade is added to the final examination grade and one third of the sum is the "final grade". Large latitude is given the teacher, especially in the more advanced work, in the method of determining the student's "final grade" but such grade must be promptly made up for each specific study and reported at the end of the quarter in which it is taken.

32. ELOCUTION AND ORATORY—Every regular student who is a candidate for a degree must take the work offered in these subjects. Each must be continuous throughout the year. The Oratory following the Elocution which should be commenced when about thirty of the required courses have been completed.

33. CHORUS SINGING.—An opportunity is given students who have ability to read simple music, to take a course in singing without extra charge. Those who desire to take this work will first see the professor in charge of the Music department, so as to give evidence of their fitness to take the course, before registering in that work. Each student will have two exercises per week. No credit is allowed for this work.

34. MILITARY REQUIREMENTS.—Every male student of the preparatory department is required to take military drill three times per week throughout the year. Every male student in the college is required to take military drill the first six quarters after entering. Later every male student is required to take courses 8 and 10 or act as an officer in the battalion for two years. Three years of military drill will be required of every student who is in the college that length of time unless he presents a physi-

cian's certificate of physical disability, or evidence of having taken the amount of drill in some other place, or who is excused by the faculty for grave reasons. Each student taking drill will be required to purchase a military uniform at a cost not to exceed sixteen dollars.

35. PHYSICAL CULTURE.—Unless excused for physical disability every female student is required to take physical culture twice a week for four years or for the entire time she is a student in the institution. Students taking physical culture will furnish special costumes for the same as indicated by the instructor.

36. ATHLETICS.—The above physical exercises only serve as bases for many other forms of athletic exercises practiced, and which are recommended and encouraged by the officers of the college. Under the auspices of the local organization, and a number of the State Athletic Associations, all kinds of athletic sports are practiced and encouraged. The local representatives contest at the state meet once a year for athletic as well as other honors.

37. LITERARY SOCIETIES.—There are two literary societies composed entirely of college students. These societies meet on every Saturday evening for literary exercises. A generous and fruitful rivalry for college honors exists between them, stimulating each to its best efforts. These societies are an important factor in the students' education and all are strongly advised to become members. All preparatory students are expected to become members of the Franklin society. The work of this society is carried on under the supervision of the head of the preparatory department and has a special function as preparation for college society work.

38. CHRISTIAN ASSOCIATIONS.—The Young Men's and Young Women's Christian Associations of the college are voluntary organizations. The purpose of the local organizations is to promote growth in grace and Christian fellowship among their members. They seek to surround the students with an earnest spiritual atmosphere; to minister to their intellectual, moral and social well being; and to exert a voluntary Christian influence in

the college which shall be strong and helpful. As members of the Christian Inter-collegiate movement they receive all the benefits which accrue from inter-collegiate fellowship and from the personal supervision of state and international college secretaries.

Each association maintains daily prayer meetings and weekly devotional services.

39. GRADUATE CLUB.—The Graduate Club has been formed for the purpose of promoting good fellowship and broad scientific interest among the graduate students and resident graduates of the college. The club meets regularly on the last Friday of each month during the school year. At these meetings papers are read, the object of which is to present in a comparatively untechnical form a brief outline of some topic of research, preferably one illustrating more recent advances in the science treated.

40. OTHER ORGANIZATIONS.—Among other organizations may be mentioned the Oratorical Association which has for its mission the promoting of Oratory among the students. It sends a representative to the state contest and at the '97 contest Clay Lawrence, one of the members, took second rank, while in '98 Ray Dillman took the same rank; both thereby becoming contestants in the interstate contest. There are various other technical organizations connected with the college, each occupying its own sphere of usefulness.

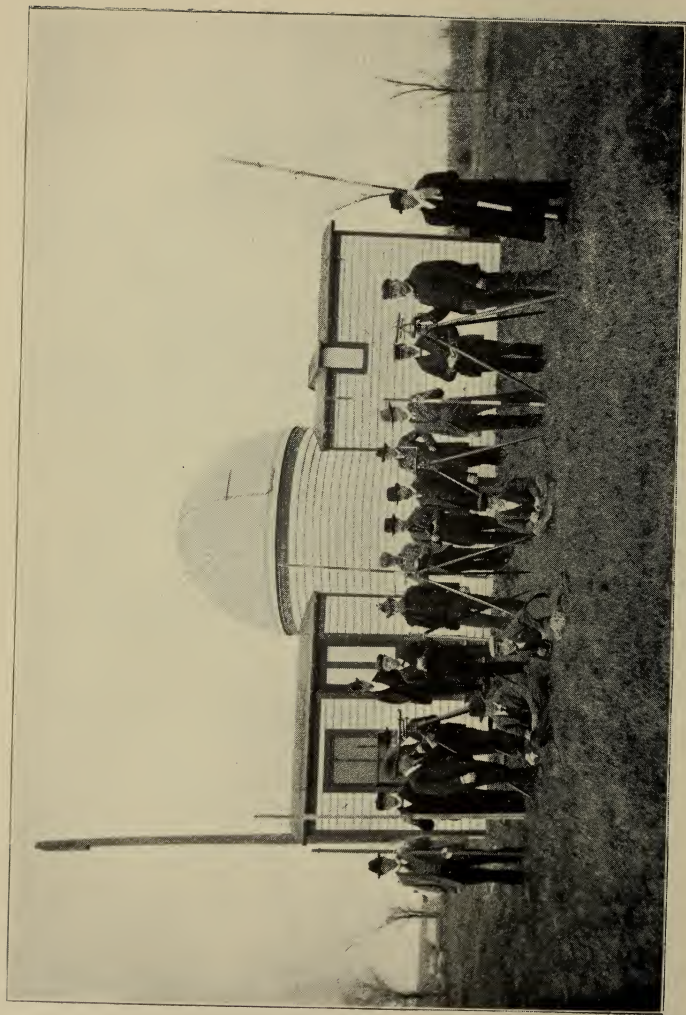
41. STUDENT PUBLICATION.—The "Industrial Collegian" is a sixteen page monthly magazine published by the students of the college. The present form is the result of the growth from the beginning, a small four page bi-weekly known as "College Sheaves" first issued in 1885. The "Collegian" aims not only to be the organ of the student body but a mirror of student life at this institution. The editorial staff is composed of ten students, affording a variety of talent, and representing the various interests of the college. The editors are anxious that every student and alumnus of the college become subscribers. Notes of interest regarding the Alumni and ex-students and other articles for publication are solicited by the editor.

42. OPENING PROGRAM OF QUARTER.—The Friday preceding is devoted to examination of candidates for admission to the preparatory department and college. Saturday and Monday is devoted to the registration of students. Tuesday the recitations begin as per schedule. Saturday evening regular quarterly reception to new students is given by the faculty and old students.

43. CLOSING PROGRAM OF QUARTER.—The work of quarters I and III will close on the last Friday of the quarter. The work of quarters II and IV the last Thursday of the quarter. The last two days will be largely devoted to final examinations and the last Friday evening of the quarter will be used for the regular closing exercises which in the case of the quarters II and IV will be the regular graduating exercises and of quarter III will be the prize speaking contest. The last Friday of quarters II and IV will be known as "College Days" more fully mentioned in C 13.

44. TIME TO ENTER.—There are four appropriate times in the year for entrance of new students and the registration of old students, viz: The beginning of each quarter. No reduction in the college fees is made when the student enters later, and if a student enters later, he will not, under any condition, be allowed to hold a class back. If a tardy beginning is imperative the student must arrange with a tutor to assist him in bringing up the work of the class in order that he may go on understandingly and without hindrance to the class.

45. EXPENSES OF STUDENTS.—No young person should be deterred from obtaining a liberal education when such advantages as this college offers can be had at a nominal price. The aggregate of all the regular fees is only four dollars per quarter and is payable at the time of registration. Books and stationery are furnished by the student. A laboratory fee of one dollar is charged for the use of each laboratory in which a student takes work. An estimate of the three quarters' yearly expenses of a student is given below in three grades viz:



PARTY IN FIELD WORK.

	Low.	AVERAGE.	LIBERAL.
Tuition.....	\$ 6	\$ 6	\$ 6
Incidental Fee.....	6	6	6
Board and Room.....	75	90	120
Clothes, including military uniform.....	30	45	65
Laundry.....	12.50	15	25
Books and Stationery...	15	25	35
Laboratory Fees.....	00	2	5
Traveling expenses.....	00	10	25
Total	144.50	199	287

Any fairly prudent student can pay all his expenses with \$165 per year.

46. LIVING ARRANGEMENTS.—The institution does not provide other dormitories than the girls' cottage which has sufficient rooms for about twenty girls who are constantly under the charge of a competent matron. In connection with this cottage a club is run under the supervision of the college which is able to furnish table board to about forty students at a cost approximately of \$2.25 per week.

Good rooms can be secured in the city at private houses or hotels for 50 cents per week and upward. There are also many places where rooms and board can be obtained at reasonable rates. A list of approved available places for boarding or rooming can at any time be obtained from the president of the college. The Christian Associations make it a point at all times to assist new students in finding proper living accommodations.

47. STUDENT LABOR.—The arrangement and amount of college work required is such that any reasonably apt student should have at least two hours per day for recreation or outside work. The terms are so distributed through the year as to give the longest period of vacation possible thus to enable students to earn money. The college is not an eleemosynary institution but it gives many opportunities for each student to perform work

which is of a purely educational character and for which no financial compensation is allowed. There is also a limited amount of paid labor about the institution which can well be done by students and it is the policy of the regents to give as much work to deserving students as is consistent with the best interests of all. No one should expect to earn his entire expenses while in college and doing his school work or be assured of an income in advance from paid labor.

PART III.

Description of Departments and Work.

1898-1899 CALENDAR.

1898.

- July 25—Registration for Quarter 1.
 - July 26—Work of Quarter I (Summer) begins.
 - July 30—Quarterly reception to new students in the evening.
 - September 16—Quarter I closes.
 - September 23—Examinations for entrance.
 - September 24 and 26—Registration for Quarter II.
 - September 27—Work of Quarter II (Fall) begins.
 - October 1—Quarterly reception to new students in the evening.
 - November 24—Thanksgiving holiday.
 - December 1—Quarter II closes.
 - December 2—College Day. Graduating exercises in the evening.
 - December 2 to January 9, 1899—Semi-annual vacation.
-

1899.

- January 6—Examinations for entrance.
- January 7 and 9—Registration for Quarter III.
- January 10—Work of Quarter III (Winter) begins.
- January 14—Quarterly reception to new students in the evening.
- February 22—Washington's birthday holiday.
- March 17—Quarter III closes. Prize speaking contest in evening.
- March 24—Examinations for entrance.
- March 25 and 27—Registration for Quarter IV.
- March 28—Work of Quarter IV (Spring) begins.
- April 1—Quarterly reception to new students in the evening.
- May 30—Memorial Day holiday.
- June 1—Quarter IV closes.
- June 2—College Day. Graduating exercises in the evening.
- June 3—Semi-annual vacations begins.

Daily Schedule.===QUARTER I.

HOUR.	8:30 a m to 9:30.	9:30 to 10:30	10:30 to 11:30	11:30 to 12:30	2:00 to 3:00	3:00 to 4:00
Heston						
Harding.....	Hi. 8 R 1	Eh 12 1st Pr 10 2nd R 1	Eh 13 R 1			
Folsom						
Ass't in Ln.....						
Prof. Mo. Ln.....						
Brown						
Crane.....	Ms. 3 R 34	Ms 20 R 34	Ms. 4 R 34.		Ae. 2, a Ms 7 second first Mo & Th R 34 b, Tu We Fr & Sa	
Preparatory						
Crosier.....						
Orr.....	Cl. 9 R 31.		Pr. 6 R 31			
Shepard.....					Ch. 10 a, Mo Tu R 46 Th & Fr b We & Sa R 47	
Whitehead						

HOUR.	8:30 to 9:30	9:30 to 10:30	10:30 to 11:30	11:3 to 12:30	2:00 to 3:00	3:00 to 4:00
McLaren.....	Zo. 1 a, Tu Th Sa R 90	Zo 1 b Mo. We	& Fr R 90		Pr. 12 a M Tu We Th Fr R 90. Pr 12 b Sa R 90	
Saunders, D. A...	Bt. 1 a, Mo We Fr R 98.	Bt. 1 b,	Tu Th Sa			
Burnett.....						
Chilcott.....	Ag 6 a M W & F Gl. 1 a, Tu Th Sa R 93.				Pr 5 R 93.	
Hansen.....			Ho 5 a Mo R 120		Ho 5 b Ho 9 Ho 4 Mo Tu F & S Ho 4 b W	Tu & Th R 120 & Th
Saunders, A. R...						
Solberg.....						
Young.....						
Mathews, H. B...	Ph. 5 a M Tu Th & Fr. R 55.	Ph 4 a Mo Tu Th & Fr 2nd Ph 3 a M Tu Th Fr	Ph. 6 R 55.		Ph. 3 b, We Sa 1st Ph. 4 b, We Sa 2d Ph. 5 b, We & Sa R 56.	
Frisble.....	Ds 1 Ds 3	R 80. R 81.				
Mathews, Eva P..					Ar. 8 R 74. Ar. 1 R 74	
Pratt.....	Mu. 2 R 62.	Mu. 3 R 62.				
Trippe.....						

QUARTER II.

HOUR.	8:30 a m to 9:30.	9:30 to 10:30	10:30 to 11:30	11:30 to 12:30	2:00 to 3:00	3:00 to 4:00
Heston	Ec. 1 Mo. We. & Fr R 1	Ec. 2 R 1,		Assem- bly We.		
Harding.....						
Folsom	Eh. 7 R 25.		Eh. 1 R 25.	Eh. 10 Tu. Eh. 11. Sa R 25.	Eh. 4 R 25.	
Ass't in Ln.....	Ln. 1 R 5.	Pr. 2 R 35	Ln. 4 R 5.			
Prof. Mo. Ln.....	Ln. 13 R 11.	Ln. 7 R 11.	Ln. 10 R 11.		Ln. 16 R 11.	
Brown	Ms. 15 MoWeFr Ms 16 R33 Tu Th Sa	Ms. 12 R 33.	Ms. 21 a Mo. We. & Fr. R 33.			
Crane.....	Ms. 1 R 34		Ms. 4 R 34.		Ae. 2. a Moor Th R 34 b. Tu&Wor Fr & S	
Preparatory.....	Pr. 1 R 35.	Pr. 2 R 35.	Pr. 3 R 35.		Pr. 6 MoWeFr R 35.	
Crosier.....	Cl. 2 R 31.	Cl. 1 R 31	Cl. 12 R 31		Cl. 12 Cl. 7 R 31.	Cl. 12 Cl. 3 R 31.
Orr.....					Pr. 6 MoWeFr R 35	
Shepard.....		Ch. 1 a, M TuTh Fr R 46. b. We & Sa R 47.	Ch. 5 a, Mo. Tu. Th. Fr. R 46.		Ch. 4 a. Mo. R 46. Ch. 4 b TuWeTh Fr R 45. Sa. Ch. 5 b. W&S R 47	
Whitehead	Py. 2 Mo Tu Th Fr R 46.	Py. 8 R 5.	Py. 1 R. 1.			Py 2 We & Sa R 46

HOUR.	8:30 to 9:30	9:30 to 10:30	10:30 to 11:30	11:30 to 12:30	2:00 to 3:00	3:00 to 4:00
McLaren.	Zo. 2 a. M Tu F S Zo. 4 a. R 90 W Th				Zo. 2 b, We & Th Zo. 4 b. M Tu F S Zo. 10 b R 90.	
Saunders, D. A. . .		Bt. 3 a. Mo We Fr Bt. 7 a. Tu & Th R 98.	Bt. 8 a. We & Fr R 98.		Bt. 5a. Tu & Th Bt. 5 b. M We Fr Sa Bt. 3 b Tu Th & Sa Bt. 7 b, M We Fr Sa Bt. 8 b, M Tu Th Sa R 98.	
Burnett.	Ag. 1 a. Mo We Fr R 96.		Ag. 3 R 96.		Ag. 1 b. Tu Th & Sa	
Chilcott.	Gl. 1 a. Tu Th Sa R 93.	Gl. 4 a. Mo We Fr R 93	Gl. 2 a. Mo We Fr R 93.		Gl. 2 b, Tu Th Sa R 93.	
Hansen.						
Saunders, A. R. . .		Ae. 4 R 4.	Ae. 5 Mo We Fr Ae. 6 Tu Th Sa R 4.		Ae. 3 R 106 Mo We Fr or Tu Th Sa	
Solberg.		Me. 9 R 103.	Me 14 R 103.		Me. 7 Me. 10 R 106	
Young.					Me. 4 R 101 Me. 2 M We Fr or Tu Th Sa R 107	
Mathews, H. B. . .	Ph. 7 We Th Fr & Sa. R 55.	Ph. 1 Mo Tu W & Th R 55.	Ph. 5 Mo Tu Th & Fr R 55.		Ph. 1 b, Fr & Sa Ph. 5 b, We & Sa Ph. 7 b, Mo & Tu Ph. 9 b, We & Th Ph. 9 a M Tu F S R 56.	
Frisbie.		Ds. 7	R 81.		Ds. 4 R 80 Ds. 1 R 80	
Mathews, Eva P. .	Ar. 3	R 74.			Ar. 9 R 74. Ar. 1 Mo We Fr or R 74 T Th & Sa Ar. 7 R 73	
Pratt.	Mu. 2 R 62.	Mu 5 Mu. 6 R 62.	Mu. 4 R 62.	Mu. 10 Mo & Th Mu. 1 Tu Fr Sa R 70.	Mu. 3 R 62.	Mu. 7 Mo We & Fr R 70.
Trippe.				Military Courses. M Th & S		

QUARTER III.

HOUR.	8:30 to 9:30	9:30 to 10:30	10:30 to 11:30	11:30 to 12:30	2:00 to 3:00	3:00 to 4:00
Heston		Ec. 4 TuTh Sa R 5.		Assem- bly. We.		
Harding	Hi. 3 R 1.	Hi. 1 R 1	Hi. 5 R 1.		Ec. 6 Tu., Th. & Sa. R 1	
Folsom.....	Eh. 5 R 25.	Eh. 8 R 25.	Eh. 2 R 25.	Eh. 10 Tu. Eh 11. Sa R 25		
Ass't in Ln.....	Ln. 2 R 5.	Pr 8 R 35	Ln. 5 R 5.			
Prof. Mo. Ln.....	Ln. 14 R. 11.	Ln. 17 R 11.	Ln. 8 R 11.			Ln 11. R 11
Brown	Ms. 19 '00 R 33.	Ms. 17 R 33.	Ms. 13 R 33.			
Crane	Ms. 2 R 34.	Ms. 5 R 34.	Ms. 9. M. We & Fr Ms. 10 Tu Th S R34			
Preparatory.....	Pr. 9 R 35.	Pr. 8 R 35.	Pr. 10 Mo. We. & Fr. R 35.		Pr. 7. R 35	
Crosier.....	Cl. 2 R 31.	Cl. 4 R 31.	Cl. 12 R 31		Cl. 12 Cl. 7 R 31.	Cl. 12 Cl 8 R 31
Orr	Cl. 9 R 31.		Pr. 10 Mo., We. & Fr. R 35		Pr. 6 Mo., We. & Fr. R 31	
Shepard		Ch. 7 a. We & Sa R 46.	Ch 2. a M Tu Th F. Ch 6 a W Sa. R 46		Ch. 2. b We & Sa Ch 7 b M Tu Th F Ch 6 b M Tu Th F R 47	
Whitehead	Py 11 R 46.	Py. 3 R 5.	Py 9 R 43.		Py 4 b R 44	

HOUR.	8:30 to 9:30	9:30 to 10:30	10:30 to 11:30	11:3 to 12:30	2:00 to 3:00	3:00 to 4:00
McLaren.....		Zo 1 a Tu & Th R 90	Zo 5 a Mo We Fr Zo Sp a Sa. R 90		Zo 1, b Sa. Zo 5 b Tu Th & Sa Zo 11 R 90	
Saunders, D. A...		Bt. 9 a. Tu S R 98 Bt. 4 a M W & F	Bt Sp a Tu & Th Bt 6 a We & Sa		Bt 9 b M W Th Fr Bt 6 b M Tu Th F Bt 4 b Tu Th & Sa R 98	
Burnett.....	Ag 6 a Tu Th Sa Dy 1 a M W F R 96	Dy 2 R 96	Dy 3 a M W & F Dy 4 a Tu Th Sa R 96		Haley Dy 5	
Chilcott.....						
Hansen.....	Ho 7 a Mo Tu Fr & Sa. R 120	Ho 5 a Mo R 120	Ho 2 a Mo Tu Fr & Sa R 120		Ho 4 a M Tu F & S Ho 4 b We & Th Ho 7 We & Th Ho 2 We & Th Ho 10 Ho 5 We & Th R 120	
Saunders, A. R...	Ae 10 R 4	Ae 9 R 4			Ae 1 M W F or Tu Th S Ae 8 R 106	
Solberg.....	Me 15 R 103				Ms 8——— R 106	
Young.....					Me 5 Me 1 Mo Tu & Fr or Tu Th & Sa R 105	
Mathews, H. B...	Ph. 6 R 55.	Ph 2 a Mo Tu Fr & Sa R 55	Ph. 8 We Th Fr & Sa R 55.		Ph. 2 We & Th Ph 10 a MT W & Th Ph 10 b Fr & Sa Ph 8 Mo & Tu R 96	
Frisbie.....	Ds 10 Mo We & Fr R 84.		Ds 2 R 84.		Ds 5 R 80 Ds 8 R 81	
Mathews, Eva P..		Ar 4	R 74		Ar. 8 R 74. Ar. 2 R 74 Ar 5 b M W & F or Tu Th & Sa Ar. 6 R 71	
Pratt.....	Mu. 2 R 62.	Mu. 5 Mu 6 R 62.	Mu 4 R 62	Mu 10 M & Th R 70 Mu 1 Tu Fr & Sa	Mu 3 R 62	Mu 8 M W & F R 70
Trippe.....				Military Courses. Mo Th & Sa		

QUARTER IV.

HOUR.	8:30 to 9:30	9:30 to 10:30	10:30 to 11:30	11:30 to 12:30	2:00 to 3:00	3:00 to 4:00
Heston			Ec 3 TuTh Sa Hi 7 Mo We F R 5.	Assem- bly. We.		
Harding	Hi. 4 R 1.	Hi. 2 R 1			Ec. 5 TuTh Sa Hi 6 M W & F R 1	
Folsom.....	Eh. 6 R 25.	Eh. 3 R 25.	Eh. 9 R 25.	Eh. 10 Tu. Eh 11. Sa R 25		
Ass't in Ln.....	Ln. 3 R 5.	Pr 11 R 35	Ln. R 5.			
Prof. Mo. Ln.....	Ln. 15 R. 11.	Ln. 12 R 11.	Ln. 9 R 11.		Ln 18. R 11	
Brown	Ms. 14 R 33.	Ms. 20 R 33.	Ms. 11 R 33.			Ms. 18 R 23
Crane	Ms. 3 R 34.		Ms. 6 R 34.			
Preparatory.....		Pr. 11 R 35.	Pr. 5 R 35.		Pr. 12 a Mo TuW Th & Fr b, Sa. R 90	Pr 4 Mo We & Fr R 35
Crosier	Cl. 5 R 31.	Cl. 4 R 31.	Cl 12 Cl 11 a M W & F R 31		Cl. 12 Cl. 7 R 31.	Cl. 12 Cl 8 R 31
Orr						
Shepard	Ch. 3 a. Mo Tu Th & Fr R 46	Ch 8. a Th & Sa Ch 9 a Tu. R 46			Ch. 3. b We & Sa Ch 8 b Tu Ch 9 b Th & Sa R 47	
Whitehead	Py 12 R 43.	Py. 5 R 5.	Py 7 R 46.		Py 6 b Py 10 4:00 to 6:00 R 44	

HOUR.	8:30 to 9:30	9:30 to 10:30	10:30 to 11:30	11:30 to 12:30	2:00 to 3:00	3:00 to 4:00
McLaren	Zo 6 a Mo We Fr R 90		Zo. 3 a R 90		Zo 12 Zo 3 b, Tu Th & Sa Pr 12 R 90	
Saunders, D. A. . .	Bt 10 a Tu Th & Sa R 98	Bt. 2 a. Tu Th & Sa R 98	Bt 1 a Mo We & Fr R 98		Bt 10 b Mo We Fr Bt 1 b Tu Th & Sa Bt 2 b Mo We & Fr R 98	
Burnett.		Ag 5 R 96	Ag 4 R 96		Ag 2 a M T W Th F Ag 2 b Sa R 96	
Chilcott.	Gl 3 R 93		Pr 5 R 93		Gl 5 b Tu Th & Sa	
Hansen	Ho 3 a Mo Tu Fr & Sa. R 120	Ho 8 a Mo Tu Fr & Sa R 120	Ho 6 a Mo Tu Fr & Sa R 120		Ho 11 Ho 8 b We & Th Ho 6 b We & Th Ho 3 b We & Th Oct 11	
Saunders, A. R. . .		Ae 7 R 4	Ae 12 Mo We & Fr R 4		Ae 1 M W F or Tu Th S Ae 11 R 106	
Solberg	Me 11 R 103	Me 13 R 103	Me 16 Mo We & Fr R 103		Me 12 R 106	
Young		Me Sp R 106			Me 17 Mo We & Fr or Tu Th & Sa Me 3 Me 3 Sp 4:00 to 6:00 R 101 Me 6 Me 13 Mo We & Fr or Tu Th & Sa R 107	
Mathews, H. B. . .						
Frisbie	Ds 9 R 81. Ds 2 R 80.				Ds 3 R 81	
Mathews, Eva P. .						
Pratt.	Mu. 2 R 62.	Mu. 5 Mu 6 R 62.	Mu 4 R 62	Mu 10 M & Th R 70 Mu 1 Tu Fr & Sa	Mu 3 R 62	Mu 8 M W & F R 70
Trippe.				Military Courses. Mo Th & Sa		

TYPICAL ARRANGEMENT OF COLLEGE WORK.

Ae. Major and Ms. Minor.

FIRST YEAR.

QUARTER II.				QUARTER III.				QUARTER IV.			
TIME	NO.	SUB.	12THS OR	NO.	SUBJECT	12THS OR	NO.	SUBJECT	12THS OR	NO.	SUBJECT
8 30	Ms 1	Algebra	12	Ms 2	Algebra	12	Ms 3	Algebra	12		
9 30	Ph 1	El. Phys.	8	Ph 2	El Phys	8	Eh 3	Rhetoric	12		
10 30	Eh 1	Eh Words	12	Eh 2	Rhetoric	12	Bt 1	Botany	6		
11 30	Drill, etc.		3		Drill, etc.	3		Drill, etc.	3		
2 00	Ar 1	F H Draw'g	6	Ph 2	El Phys	4	Bt 1	Botany	6		
	Ph 1	El Phys	4	Zo 1	El Zool	6	Ae 1	Inst Dr'y	6		

SECOND YEAR.

3 30	Gl 1	El Geol	6	Eh 5	Literature	12	Eh 6	Literature	12
9 30	Ch 1	Chemistry	12	Ms 5	Geometry	12	Bt 2	Botany	6
10 30	Ms 4	Geometry	12	Ch 2	Chemistry	8	Ms 6	Trig	12
11 30	Drill, etc.		3		Drill, etc.	3		Drill, etc.	3
2 00	Eh 4	Literature	12	Ch 2	Chemistry	4	Bt 2	Botany	6
				Me 1	Carpentry	6	Me 17	Wood T'n'g	6

THIRD YEAR.

8 30	Ln 13	French	12	Ln 14	French	12	Ln 15	French	12
9 30	Ae 4	El of Ae	12	III 1	Gen. History	12	Hi 2	Gen. History	12
10 30	Ph 5	Physics	8	Ms 9 & 10		12	Ms 11	Anal. Geom.	12
11 30	Drill, etc.		3		Drill, etc.	3		Drill, etc.	3
2 00	Ph 5	Physics	4	Ar 5	Clay Modeling	6	Ch 8	Ind. Ch.	6
	Ae 3	Ae Draw'g	6						

FOURTH YEAR.

8 30	Ph 7	Physics	8	Hi 3	Am. History	12	Ln 18	French	12	
9 30	Ms 11	Calculus	12	Ln 17	French	12	Ae 7	Bld. Contracts	12	
11 30	Eh 11	Elocution	2	10 30	Eh 11	Elocut'n	2	Zo 3	Physiology	12
2 00	Ln 16	French	12	Ae 8	Design	12	Eh 11	Elocution	2	
3 00	Ph 7	Physics	4				Ae 11	Pr. Design	12	

FIFTH YEAR.

8 30	Ec 1	Psychology	6	Ae 10	Sanitation	12	Gl 3	Geology	12
9 30	Ec 2	Theory	12	Ae 9	Ae History	12	Ms 20	Astronomy	12
10 30	Ae 6	Hyd'mch's	6	Hi 5	Cons'l Law	12	Ec 3	Ethics	6
11 30	Eh 12	Oratory	2	Eh 12	Oratory	2	Eh 12	Oratory	2
2 00	Ar 7	Wood Crv.	12				Ae 12	Superin'ce	6

EXPLANATORY NOTE—a is a one hour class period; b is a two hour laboratory period; I, II, III & IV are the first, second, third and fourth quarters: Pre. is prerequisite; Quar. for quarter, and Quars. for quarters. Arabic figures are the number of the course. Full or fraction denotes the amount of credit for that course. Bold faced type required for B. S. Degree. Practicums in italics. Mo, for Monday, Tu. for Tuesday, We. for Wednesday, Th. for Thursday, Fr. for Friday and Sa. for Saturday. R for room. Rooms up to 50 in Central building, From 50 to 90 in North Building. From 90 to 100 in South Building. From 100 to 110 in Mechanical Building. Over 110 in Horticultural Building.

DEPARTMENT OF ARCHITECTURAL AND AGRICULTURAL ENGINEERING.

Ae.

The work in architecture is designed to fit students for draughtsmen or superintendents. The other work is intended to supply such a knowledge of rural engineering as every practical farmer should have. The equipment consists of instruments, reference works, and illustrative material.

The following courses are offered; viz:—

Saunders, A. R.

1. *III & IV—Instrumental Drawing. b, 30, Full.*
b, Problems in geometrical drawing involving best use of instruments,

Mo., We., & Fr., or Tu., Th., & Sa., 2:00 to 4:00 R. 106.

3. *II—Architectural Drawing, b, 30, Full.*
Pre. 1 or Me. 7.

- b, Rendered drawings of simple buildings, examples of various orders, giving facility in draughtsmanship, familiarizing students with principles, supplementary to 4.

Mo. We. & Fr. or Tu. Th. & Sa. 2:00 to 4:00. R, 106.

4. *II—Elements of Architecture, a, 60. Full.*
Pre. 1 or Me. 7, Me. 1 and Ms. 6 or 7.

- a, Consideration and study of the five orders of architecture, appropriate exterior and interior details, adaptation to various problems of different styles. Lectures and class room.

Every day, 9:30 to 10:30. R. 4.

5. *II—Farm Engineering, a, 30. Half.*

- a, Lectures on drainage involving irrigation methods, simple work in hydraulics, road repair and construction and care of farm machinery. Lectures and collateral readings.

Mo., We., & Fr., 10:30 to 11:30. R, 4.

6. *II—Hydromechanics, a, 30. Half.*
Pre. Ms. 11.

Study of the action of water under different conditions.

Tu., Th., & Sa., 10:30 to 11:30. R. 4.

Bowser's Hydromechanics.

7. *IV—Building Construction, a, 60. Full.*
Pre. 8.

- a, Wood, masonry and fire-proof construction in detailed application to buildings. Every day, 9:30 to 10:30. R, 4.

Kidder's Building Construction.

8. III—Design, b, 60. Full.
Pre. 3 & 4.
b, Principles of planning introduced in practical problems, exercises in composition and details.
Every day, 2:00 to 4:00. R, 106.
9. III—Architectural History, a, 60. Full.
Pre. 8.
a, History of the evolution of common styles and processes of building, from ancient beginnings, especial application to Greek and Roman orders and their modern utilization.
Every day, 9:30 to 10:30. R. 4.
10. III—Sanitation, a, 60. Full.
Pre. Ms. 6 or 7.
a, Elements of sanitary engineering; water supply, sewage disposal and other problems in municipal engineering.
Every day, 8:30 to 9:30. R. 4.
11. IV—Practical Design, b, 60.
Pre. 9 and Me. 15 & 16.
b, Solution of practical problems in design.
Every day, 2:00 to 4:00. R. 4.
12. IV—Superintendence, a, 30. Half.
a, Duties in detail of superintendent and clerk of works.
Mo., We., & Fr., 10:30 to 11:30.
Crane.
2. I & II.—Surveying a, 10. b, 20. Half.
Pre. Ms. 6. or 7.
a, Theory of surveying; study of United States Manual of Surveying.
Quar. I, last half, Mo. & Th., 2:00 to 3:00. R. 34.
Quar. II., Mo. or Th. 2:00 to 3:00. R. 34.
b, Field work.
Quar. I, last half, Tu. We., Fri. & Sa, 2.00 to 4.00.
Quar. II, Tu. & We. or Fr. & Sa., 2:00 to 4:00.
Wentworth's Trigonometry and Surveying. R. 34.
- Me., 15. III—Strains in Framed Structures, a, 60, Full.
Ar., 2 III—Freehand Drawing, b, 60, Full.
Ar., 3. II—Cast Drawing, b, 60. Full.
Ar., 5. III—Clay Modeling, b, 30, Half.
Ar., 7. II—Wood Carving, b, 60. Full.



INDUSTRIAL ART DRAWING ROOM.

DEPARTMENT OF ART.

Ar.

The work offered in Art is useful in various ways. It occupies a useful field in the study of any of the sciences where drawings and sketches are required. It cultivates the eye to see and the mind to appreciate the beauties of nature. It develops both the practical and the aesthetic. It enables the hand to do the will of the mind and to interpret what is seen by the eye. It is of much practical importance when it comes to the arrangement of a house so as to make it pleasant and attractive.

Work is offered in free-hand, perspective, cast and advanced drawing, drawing from life, painting from still life and life, clay modeling and wood carving. The department has commodious quarters for each of its special lines of work. It is well provided with casts, such as tablets, figures in relief, busts, full figures of animals and men; still life objects and drawing boards for work in drawing; tools for wood carving, bust and figures for copies in clay modeling and still-life objects, easels and studios for work in painting. Special students will be advanced as fast as their ability permits. Books of reference and art magazines are kept in the library for the use of students.

The following work is offered in Quarters I, II & III.

Mathews, Eva P.

1. I & II.—Freehand Drawing, b, 30. Half.

b, Pencil drawing in outline from blocks and familiar objects, memory sketches, talks on conventionalization, use of the line in form, texture and surface, interpretation and general expression.

Mo., We. & Fr. or Tu., Th. & Sa., 2:00 to 4:00. R. 74.

2. III—Freehand Drawing, b, 60. Full.

Pre. 1.

b, Pencil and perspective continued, charcoal drawing from casts in outline and general light and shade. Memory sketches.

Every day 2:00 to 4:00. R, 74.

3. II—Cast Drawing, b 60. Full.
Pre. 1 & 2.
b, Charcoal drawing from casts in full light and shade. Sketching from nature.
Every day, 8:30 to 10:30, R, 74.
4. III—Antique Drawing, b, 60. Full.
Pre. 1, 2 & 3.
b, Study in charcoal of heads and figures from the antique, anatomy, sketching from life.
Every day, 9:30 to 11:30. R, 74.
5. III—*Clay Modeling*, b, 30. Half.
Pre. 1.
b, Modeling of separate features of the face using plaster cast models. The mask, flowers and fruit in relief.
Mo., We. & Fr. or Tu., Th. & Sa., 2:00 to 4:00. R, 71.
6. III—Clay Modeling, b, 60. Full.
Pre. 5.
b, Continuation of course 5. Modeling of head and bust. Statuettes from cast and original design.
Every day, 2:00 to 4:00. R, 71.
7. II—Wood Carving, b, 60. Full.
Pre. 5.
b, Proper handling of various tools used in wood carving, and the designing and carving of useful and ornamental articles.
Every day, 2:00 to 4:00. R, 73.
8. I & III—Oil Painting, b, 60. Full.
Pre. 1 & 2.
b, Still life; with special attention paid to color values. Talks on color composition, harmony of tints, light and shade effects, and the distinctive features of the different schools of painting.
Quars. I & III, every day 2:00 to 4:00, R, 74.
9. II—Oil Painting, b, 60. Full.
Pre. 8.
b, Continuation of course 8. Painting from life.
Every day 2:00 to 4:00. R, 74.



GLIMPSE OF THE FARM.

DEPARTMENT OF AGRICULTURE.

Ag.

The student in agriculture can select his quota of courses from those named under this head which consist largely of work pertaining to soils and animal husbandry; in this state their importance is readily recognized; the work under the former is more specifically set forth under Gl. The instruction in animal husbandry is facilitated and made practical by the operations of a stock farm of some two hundred fifty acres used to maintain specimen animals and illustrate certain methods of managing stock farms and of feeding live stock.

Eleven breeds of cattle, sheep and swine numbering in all about one hundred twenty-five animals are kept to illustrate types of animals suited to special purposes. These types illustrate dairy and beef breeds of cattle, mutton breeds of sheep, and various types of swine suited to special conditions. They afford the student an opportunity to observe practical methods of feeding and management. The policy in equipping the farm has been to procure as great a diversity of implements and appliances, as is consistent with economical management, so as to give the student opportunity to observe points of merit in each machine.

A creamery of modern pattern and equipment is in use to illustrate and give practice in the special dairy course.

The following work is offered and described:

Burnett.

1. II—Domestic Dairying, a 30; b, 30. Full.
 - a, Care and manipulation of milk, manufacture of butter, approved dairy methods in care of utensils, proper regulations of herds, stable methods, fancy butter making discussed and practiced. Mo., We., & Fr., 8:30 to 9:30. R 96.
 - b, Practice in application of above methods. Tu. Th. & Sa., 2:00 to 4:00. Creamery. Wing's (Milk and its Products).

American Dairying.

2. IV—Breeds of Live Stock, a 50; b, 10. Full.
 - a, Characteristics of various breeds of live stock, their adaptability to special locations for special purposes. Methods of breeding and selection pursued in the development of each

breed. All breeds are studied in their relation to types, and much importance is placed on actual test as a guarantee of merit. Extension and economic development of different branches of live stock industry.

Mo., Tu., We., Th., & Fr., 2:00 to 3:00. R 96.

b, Judging stock. Sa., 2:00 to 4:00. Farm.

Curtis's Cattle, Horses, Sheep and Swine.

Numerous books of reference.

3. II—Stock Feeding, a 60. Full.
Pre. 2.

a, Laws of nutrition and waste of the body under labor or at rest, the income and expenditure of energy, composition of the body and of food consumed to produce the most economical result. Scientific feeding and balanced rations for large production of dairy or meat products, finishing animals for market and care and management of live stock.

Every day, 10:30 to 11:30. R 96.

W. A. Henry's Feeds and Feeding.

Numerous books of reference.

4. IV—Stock Breeding, a, 60. Full.
Pre. 2 and Zo. 1.

Lectures and references to original research on the laws of reproduction as influenced by variation, selection and heredity. The effects of environment, use and disuse, crossing, and in-breeding in relation to their effects on variation and heredity, methods of selection to perfect types and secure prepotency.

Every day, 10:30 to 11:30. R 96.

Miles' Stock Breeding and other books of reference.

5. IV—Equipment of Stock Farms, a, 60. Full.

a, Adaptability of individuals and localities to different branches of stock production, depending on natural fertility, crop production, water supply and markets, management of dairy farms, the maintenance of sheep and cattle ranches, stock to consume residues and growing and furnishing of animals for market, construction and arrangement of barns and other farm buildings from economic and sanitary standpoints.

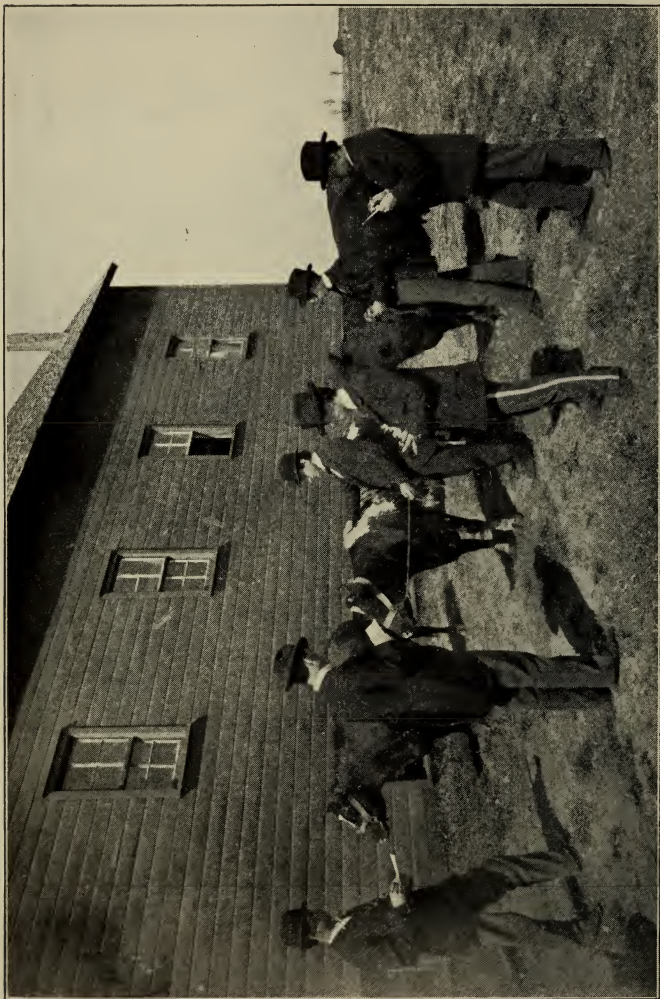
Every day, 9:30 to 10:30. R 96.

6. I. & III.—General Agriculture, a, 30. Half.

b, Lectures on practical and theoretical Agriculture.

Quar. III, Tu., Th., & Sa., 8:30 to 9:30. R 96.

Quar. I, Mo., We., & Fr., 8:30 to 9:30. R 93.



JUDGING STOCK.

Chilcott.

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|--------|--|-------|
| Gl. 2. | II—Soil Physics, a, 30; b, 30. | Full. |
| Gl. 3. | IV—Advanced Geology, a, 60. | Full. |
| Gl. 4. | II—Soil Fertility, a, 30. | Half. |
| Gl. 5. | IV.—Agricultural Experimentation, a, 60. | Full. |

Shepard.

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| Ch. 6. | III.—Agricultural Chemistry, a, 20; b, 40. | Full. |
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Saunders, A. R.

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|--------|------------------------------|-------|
| Ae. 5. | II.—Farm Engineering, a, 30. | Half. |
|--------|------------------------------|-------|

SHORT COURSE IN AGRICULTURE.

(From Jan. 9 to Mar. 17, '99.)

An arrangement of certain short courses in Quar. III (winter) designed to be taken by farmers or farmers' sons who for any reason are unable to take more extended work. To such students this work will be as valuable and should become as popular as the special dairy work. The work consists of the following courses, upon completion of which students will be given a certificate.

Burnett.

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|--------|---------------------------------------|-------|
| 6. | I & III—General Agriculture, a, 30. | Half. |
| | Tu., Th., & Sa., 8:30 to 9:30. | R 96. |
| Dy. 1. | III.—Care of Dairy Cows, a, 30. | Half. |
| | Mo., We., & Fr., 8:30 to 9:30. | R 96. |
| Dy. 2. | III.—Practical Dairy Lectures, a, 60. | Full. |
| | Every day, 9:30 to 10:30. | R 96. |
| Dy. 3. | III.—Dairy Arithmetic, a, 30. | Half. |
| | Mo., We., & Fr., 10:30 to 11:30. | R 96. |

Haley.

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|--------|----------------------------------|-------|
| Dy. 5. | III—Dairy Practice, b, 60. | Full. |
| | Tu., Th., & Sa., p. m. Creamery. | |

McLaren.

- | | | |
|---------------|-------------------------------|--------|
| Zo. (Special) | III—Practical Zoology, a, 10. | Sixth. |
| | Sa., 10:30 to 11:30. | R 90. |

Saunders, D. A.

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|---------------|---|--------|
| Bt. (Special) | III—Practical Botany and Entomology, a, 20. | Third. |
| | Tu. & Th., 10:30 to 11:30. | R 98. |

DEPARTMENT OF DAIRY SCIENCE.

Dy.

(From Jan. 9 to Mar. 17, '99.)

In response to popular demand for instruction in dairy science resulting from the rapid growth and importance of the industry in the state, the college has for some years maintained facilities for this instruction. The work combines in a proper degree, theoretical and practical methods. During the wait for funds from the state legislature for replacing the college creamery recently burned the Brookings Co-operative Creamery Company generously placed their modern plant at the disposal of the college for purposes of instruction.

Students if possible should have previous experience in creamery practice and as the number of students which can be accommodated is limited, the application of those who have had some experience will be given the preference. A satisfactory completion of the work offered entitles the student to a certificate of competency as helper and after four months in this capacity, on the recommendation of his creamery manager, he may receive an advanced certificate as competent to operate a creamery.

The following work is offered, viz:

Burnett.

1. III.—Care of Dairy Cows, a, 30. Half.
Mo., We., & Fr., 8:30 to 9:30. R 96.
6. I & III.—General Agriculture, a, 30. Half.
Tu., Th. & Sa., 8:30 to 9:30.
2. III.—Practical Dairy Lectures, a, 60. Full.
Every day, 9:30 to 10:30. R 96.
3. III.—Dairy Arithmetic, a, 30. Half.
Mo., We., & Fr., 10:30 to 11:30. R 96.
4. III.—Dairy Engineering, a, 30. Half.
Tu., Th., & Sa., 10:30 to 11:30. R 96.

Haley.

5. III.—Creamery Practice. Full.
Every day, p. m. Creamery.

Orr.

- Pr. 6. I, II & III.—Bookkeeping, a, 30. Half.
Mo., We. & Fr., 2:00 to 3:00.



BOTANICAL LABORATORY

DEPARTMENT OF BOTANY.

Bt.

The work in Botany is arranged to give the student a thorough knowledge of plant life. The department occupies the second floor of the South Building, having an office, lecture room, herbarium and laboratory. It is provided with all the apparatus necessary for biological work including microtome, microscopes and physiological apparatus.

Saunders, D. A.

1. I & IV—Elementary Botany, a, 30; b, 30. Full.

a, General morphology of the phanerogams—a study of the structure and functions of seeds, buds, flowers and leaves—the manufacture and storage of foods—the relation of flowers and insects. Quar. I, Mo., We. & Fr., 8:30 to 9:30

Quar. IV, Mo., We. & Fr., 10:30 to 11:30. R 98.

b, Demonstrations of (a). Quar. I, Tu., Th. & Sa., 9:30 to 11:30.

Quar. IV, Tu., Th. & Sa., 2:00 to 4:00. R 98.

Setchell's Laboratory Practice for Beginners.

2. IV.—Systematic Botany, a, 30; b, 30. Full.

Pre. Bt. 1.

a, Ferns, flowering plants, their relationship and distribution.

Tu., Th. & Sa., 9:30 to 10:30. R 98.

b, The collecting, analyzing, naming and mounting of an herbarium of one hundred plants.

Mo., We. & Fr., 2:00 to 4:00. R 98.

Gray's Manual of Botany.

3. II.—Cryptogamic Botany, a, 30; b, 30. Full.

Pre. Bt. 1 & 2.

a, Structure and life history of type specimens of the lower plants from the bacteria to the ferns, a study of the fungi destructive to farm and garden crops.

Mo., We. & Fr., 9:30 to 10:30. R 98.

b, Laboratory work covering topics in (a).

Tu., Th. & Sa., 2:00 to 4:00. R 98.

Bessey's Essentials of Botany.

4. III.—Ferns and Flowering Plants, a, 30; b, 30. Full.

Pre. Bt. 1 & 2.

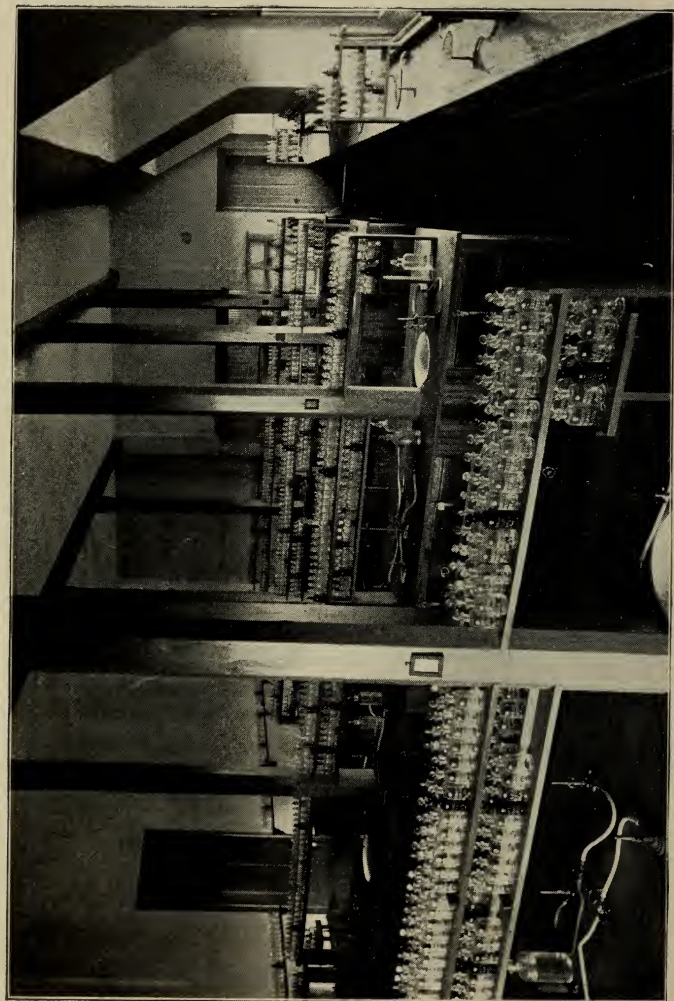
a, History and Physiology. A study of the minute tissues of the higher plants. Mo., We. & Fr., 9:30 to 10:30. R 98.

b, The solving of physiological problems by experimentation.

Tu., Th. & Sa., 2:00 to 4:00. R, 98.

Bessey's Botany and Lectures.

5. II.—Pharmacognosy, a, 20; b, 40. Full
Pre. Bt. 1 & 2.
a, Families of medicinal plants, the histology of the important drugs, study of the glands, reservoirs or receptacles of the essential parts of the drugs. Tu. & Th., 2:00 to 3:00. R 98
b, Demonstrations of (a).
Mo., We., Fr., & Sa., 2:00 to 4:00. R 98
Sayer's Organic Materia Medica and Pharmacognosy.
6. III.—Pharmacognosy, a, 20; b, 40. Full
Pre. 5.
a, Continuation of 5. We. & Sa., 10:30 to 11:30. R 98
b, Demonstrations of (a). Mo., Tu., Th. & Fr., 2:00 to 3:00. R 98
Sayer's Organic Materia Medica and Pharmacognosy.
7. II.—Systematic Botany and Ecology, a, 20; b, 40. Full
Pre. 1, 2, 3 & 4.
a, The principal families of flowering plants, their distribution and relationship, lectures on relation of the plant to its environment. Tu. & Th., 9:30 to 10:30. R 98
b, Demonstrations of (a) Mo., We., Fr., & Sa., 2:00 to 3:00. R 98
8. II.—Embryology and Phytopaleontology, a, 20; b, 40. Full
Pre. 1, 2, 3 & 4.
a, A study of the life history of some plant, lectures in fossil botany. We., & Fr., 10:30 to 11:30. R 98.
b, Demonstrations of (a).
Mo., Tu., Th., & Sa., 2:00 to 4:00. R 98
9. III.—Mycology, a, 20; b, 40. Full
Pre. 1, 2, 3, & 4.
a, Structure and reproduction of the more important fungi especial attention will be given to those that are destructive to economic plants. Tu. & Sa., 9:30 to 10:30. R 98
b, Demonstrations of (a). Mo., We., Th. & Fr., 2 to 4. R 98
10. IV.—Entomology, a 30; b, 30. Full
Pre. 1 & 2; Zo. 1 & 2.
a, Study of the life history of several type insects, means employed in combatting insects destructive to economic plants. Tu., Th. & Sa., 8:30 to 9:30. R 98
b, Demonstrations of (a). Mo., We. & Fr., 2:00 to 4:00. R 98
Comstock's Entomology.
- Special, III—Practical Botany & Entomology, a, 20. Third
Tu., & Th., 10:30 to 11:30. R 98



GENERAL CHEMICAL LABORATORY.

DEPARTMENT OF CHEMISTRY.

Ch.

The department is equipped with the latest and most approved appliances for instruction.

The student upon beginning the subject is assigned a desk in the main laboratory. This desk is supplied with a set of reagent bottles, gas and water fixtures. In addition to these a supply of all needful apparatus, such as test tubes, generating flasks and the like, is furnished. The main laboratory accommodates from eighty to one hundred students all working at the same time.

Upon completing the necessary elementary work the student now finds a quantitative laboratory at his disposal. This laboratory accommodates twenty students working together. It is supplied with all needful quantitative apparatus such as precipitation flasks, dessicators, lamps and crucibles.

In conjunction with the quantitative laboratory is a balance room supplied with high grade Sartorius quantitative balances. The work is so planned that the student has laboratory work together with didactic instruction throughout the course.

The experiment station laboratories are also located at this college and their costly and technical appliances and the practical work in constant progress there are within reach for instruction.

The following courses are offered:

Shepard.

1. II.—Qualitative Inorganic Chemistry, a, 40; b, 20. Full.

Pre. Ph. 2 and Ms. 2.

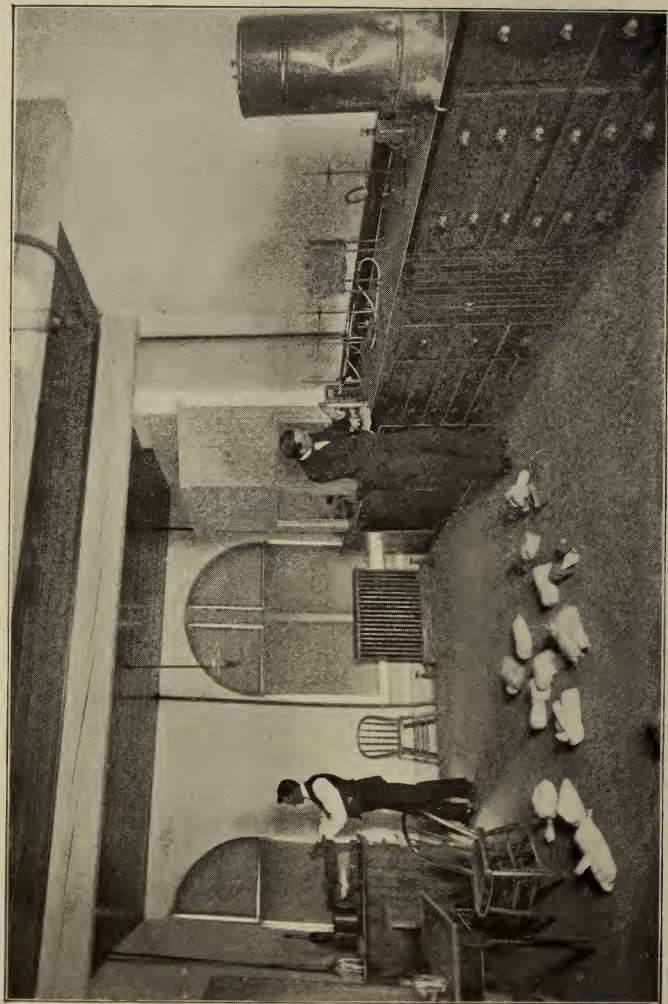
a, History of chemistry, elements, compounds, symbols, valence, atomic weights, chemical equations; oxygen, hydrogen, nitrogen, chlorine, bromine, fluorine, iodine, sulphur, phosphorus, silicon and their compounds. Bases, salts, acids and alkalies. Mo., Tu., Th. & Fr., 9:30 to 10:30. R. 46.

b, Detection of the non-metallic elements and their compounds.

We., & Sa., 8:30 to 10:30. R. 47.

Shepard's Elements of Chemistry.

2. III.—Qualitative Inorganic Chemistry, a, 40; b, 20. Full.
Pre. 1.
- a, The metals and their compounds. Groups of metals. separation of the metals and uses of their compounds.
Mo., Tu., Th., & Fr., 10:30 to 11:30. R. 46.
- b, Detection of principle metals and the working of a list of unknowns.
We., & Sa., 2:00 to 4:00. R. 47.
Shepard's Elements of Chemistry.
3. IV—Qualitative Organic Chemistry, a, 40; b, 20. Full.
Pre. 2.
- a, The principal classes of organic compounds, the characteristics and properties of each class and the use of their various compounds.
Mo., Tu., Th., & Fr., 8:30 to 9:30. R. 46.
- b, The detection of principle organic compounds.
We., & Sa., 2:00 to 4:00. R. 47.
Shepard's Elementary Organic Chemistry.
4. II.—Quantitative Chemistry, a, 10; b, 50. Full.
Pre. 2.
- a, The apparatus and its uses. Explanation of methods of quantitative determinations and reports of student analyses.
Mo. 2:00 to 3:00. R. 46.
- b, The quantitative analysis of typical chemical compounds, eg, calcite, magnesium sulphate and coal. Students will use both the volumetric and gravimetric methods.
Tu., We., Th., Fr. & Sa., 2:00 to 4:00. R. 44.
Fresenius' Quantitative Chemistry.
5. II.—Chemistry of Foods, a, 40; b, 20. Full.
Pre. 2.
- a, Study and detection of adulterants in baking powders, milk, butter, cereals, spices, fats and other foods.
Mo., Tu., Th., & Fr., 10:30 to 11:30. R. 46.
- b, Determinations of (a) We., & Sa., 2:00 to 4:00. R. 44.
6. III.—Agricultural Chemistry, a, 20; b, 40. Full.
- a, Chemistry of fertilizers, feed stuffs, fruits, vegetables, grasses, dairy products, alcoholic liquors and soils.
We., & Sa., 10:30 to 11:30. R. 46.
- b, Analyses of fertilizers, grasses, dairy products, feed stuffs and soils.
Mo., Tu., Th., & Fr., 2:00 to 4:00. R. 47.



EXPERIMENT STATION, CHEMICAL LABORATORY.

7. III.—Physiological Chemistry, a, 20; b, 40. Full.
Pre. 3 and 4; Zo. 1, 2, and 3.
a, Composition of blood, muscle, urine, albumen, fat, bone, gall,
liver and products of the glands. We., & Sa., 9:30 to 10:30. R. 46.
b, Quantitative determinations of (a) Mo., Tu., Th. & Fr., 2:00 to 4:00. R. 47.
8. IV.—Industrial Chemistry, a, 20; b, 10. Half.
Pre. 3 & 4.
a, Chemistry of manufacturing glass, paper, sugar, petroleum,
explosives, acids, water, air, mortars, pigments, photography,
alkalies and gases. Th. & Sa., 9:30 to 10:30. R. 46.
b, Demonstrations of examples including water pollution, puri-
fication, artificial illumination, petroleum testing, fermenta-
tion, air contamination, disinfection, ventilation, bleaches
and dyeing. Tu. 2:00 to 4:00. R. 47.
9. IV.—Quantitative Organic Chemistry, a, 10; b, 20. Half.
Pre. 3 & 4.
a, Physical properties of organic compounds, the general rela-
tions existing between classes of compounds and the trans-
formation from one class into another. Tu., 9:30 to 10:30. R. 46.
b, Demonstrations of (a). Th. & Sa., 2:00 to 4:00. R. 47.
10. I.—Elementary Inorganic Chemistry, a, 40; b, 20. Full.
a, History of chemistry, elements, compounds, symbols valence,
atomic weights, chemical equations, bases, salts, acids, alka-
lies, with special study of oxygen, hydrogen, nitrogen, chlor-
ine, bromine, the metals and their groups, with the separa-
tion and uses of their compounds. Mo., Tu., Th. & Fr., 2:00 to 3:00. R. 46.
b, Detection of the principal non-metallic elements, the metals
and their compounds. We. & Sa. 2:00 to 4:00. R. 47.
Shepard's Briefer Course.

THE U. S. EXPERIMENT STATION.

Ex.

Under the provision of the Hatch Act the Agricultural Experiment Station for South Dakota is established in connection with the Agricultural College.

This station is well provided with land and laboratories. The Agricultural department has about 60 acres most of which is in experimental plats. The Horticultural department has about the same amount. This department also has a building set apart for its own use together with a green house, storage cellar and hot beds.

The department of Agriculture and Soil Physics has farm facilities, seed house, tool house and finely equipped laboratory for soil investigation.

The department of Chemistry has a fine laboratory and facilities for carrying on all kinds of Agricultural analyses.

The department of Botany and Entomology has extensive herbarium collections and all needful laboratory fittings.

The department of Animal Pathology is also well supplied with all needful apparatus to furnish its laboratories.

This station was founded in 1888. Since its establishment it has issued 60 Bulletins treating on various crops, industries, resources and conditions incident to this new state. It is actively engaged in trying to aid our farmers in making home life in South Dakota attractive and profitable. All letters making inquiries for Bulletins and information will receive prompt attention. Communications should be addressed to the Director U. S. Experiment Station, Brookings, South Dakota.



PRACTICAL BUSINESS ROOM.

DEPARTMENT OF COMMERCIAL SCIENCE.

Cl.

Appreciating the fact that business men are governed largely by certain specific and established rules, it becomes necessary that this department keep in touch with these usages and impart the same to the student in such definite and concise terms as shall prepare him for successful entrance to the business world.

The rooms for the department are exceptionally well suited and adapted to the work of the business student. The amanuensis room is supplied with fifteen typewriting machines and ample table and black board surface. The offices such as the Bank, Post Office and Mercantile are well fitted for giving the student actual practice in business methods. The college library affords good opportunity for references and collateral reading. It is essential that beginners in short hand be present Quarter II. In general the best results can be obtained by the student starting at that time and keeping up consecutive work throughout the year.

Students electing their major in this department must take courses 1, 2, & 4 or 5, 7, & 8 and those completing all the courses offered and Eh 1 will be given a certificate of graduation in Commercial Science. The following courses are offered, viz:

Crosier.

1. II.—Shorthand, a, 60. Full.

a, Fundamental principles, consonant stems in logical order, vowels and diphthongs, the formation of word signs, the comparative relation of the different strokes, habits of co-ordination. Every day, 9:30 to 10:30. R. 31.

Graham system.

2. II & III.—Shorthand, a, 60. Full.

Pre. 1.

a, A continuation of 1. Elimination of vocalization through position, co-ordination of word signs, practice in writing exercises. Every day, 8:30 to 9:30. R. 31.

Graham system.

3. II.—Penmanship, b, 30. Half.
 a, Attention given to individual students, correct position and easy movement. Every day, 3:00 to 4:00. R. 31.
4. III & IV.—Advanced Dictation, a, 60. Full.
 Pre. I & II.
 a, Rapid exercises in writing testimony, contracts, deeds, mortgages, agreements and other law forms and the acquirement of a thoroughly equipped shorthand ability.
 Every day, 9:30 to 10:30. R. 31.
5. IV.—Commercial law, a, 60. Full.
 a, Contracts, agents, partnerships, personal property, bailments common carriers, negotiable papers, deeds, mortgages, leases, collection laws, interest, insurance and patents.
 Every day, 8:30 to 9:30. R. 31.
 Weed's Commercial Law.
7. II, III, & IV.—Bookkeeping, a, 60. Full.
 a, Analysis of accounts, journalizing, posting and trial balance, retail mercantile business, bank accounts, changing from single to double entry. Every day, 2:00 to 3:00. R. 31.
 Benton's Practical Bookkeeping
8. III & IV.—Business Practice, a, 60. Full.
 a, Each student carries on regular business in practice rooms.
 Every day, 3:00 to 4:00. R. 31.
11. IV.—Correspondence, a, 30. Half.
 a, Proper forms for business telegrams, letters, public notices and advertisements, letter headings, salutations, paragraphing, signature, address and folding.
 Mo., We., & Fr., 10:30 to 11:30. R. 31.
12. II, III & IV.—Typewriting, b, 30. Half.
 b, First—Exercise on machine to learn key board.
 Second—Business letters and law forms.
 Third—Manifolding, direct dictation, speed practice.
 One hour each day between 10:30 & 4:00. R. 31.
 Orr.
9. I & III.—Commercial Arithmetic, a, 60. Full.
 a, Short methods in addition, subtraction, multiplication and division, rapid calculation in percentage, interest, discount and ordinary arithmetical processes.
 Quars. I & III, every day, 8:30 to 9:30. R. 31.
 Sadler's Arithmetic.



SEWING ROOM.

DEPARTMENT OF DOMESTIC SCIENCE.

DS.

The work of this department is designed not alone to give the student a knowledge of the subjects which is so important to the house-keeper or home-maker but in addition, to develop the mind by training the hand, and at the same time teach the science of comfortable healthful living. As an example the work in sewing teaches the student how to make the various garments, their appropriateness under different conditions and the methods of manufacture of some of the common fabrics. Attention is given to dining room etiquette and the tasty arrangement of table. A course in household sanitation is offered.

The department has ample rooms for its different sections of work which are well supplied with proper equipment such as sewing machines, cooking utensils and charts. A large number of illustrative samples are kept at hand for use in connection with lectures. Many books of reference and leading magazines on the subject are kept in the general library. The following courses will describe the work more fully:

Frisbie.

1. *I & II.—Plain Sewing, b, 60.* *Full.*

b, Practice upon samples of the stitches in every day use making of plain garments, button hole making. Occasional talks on the manufacture of plain textile fabrics, such as cotton, wool and flax.

Quar. I, every day, 8:30 to 10:30.

Quar. II, every day, 2:00 to 4:00. R. 80.

2. *III.—Household Economy, a, 60.* *Full.*

a, Household economy chemistry and botany lectures on foods and the preparation of same and upon the general care of dining room and kitchen. Every day. 10:30 to 11:30. R. 84.

3. *I & IV.—Cooking, b, 60.* *Full.*

b, Bread making, cooking of meats, puddings, cakes, and general plain cooking, with occasional talks on the principles of combustion, desirable features in ranges, ancient methods of cooking, nutritive values of common foods, and common food adulterations.

Quar. I, every day, 8:30 to 10:30.

Quar. IV, every day, 2:00 to 4:00. R. 81.

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4. II.—Sewing, b, 60. Full.
 Pre. 1.
 b, Cutting and making of trimmed undergarments; drafting, cutting and making of plain dresses and general dressmaking. Every day, 2:00 to 4:00. R. 80.
5. III.—Sewing, b, 60. Full.
 Pre. 4.
 b, Drafting, cutting and making of more elaborate garments and simple millinery operations. Every day, 2:00 to 4:00, R. 80.
6. IV.—Sewing, b, 60. Full.
 Pre. 5.
 b, Art needle work, including embroidering and hem-stitching. Every day, 9:30 to 11:30. R. 80.
7. II.—Cooking, b, 60. Full.
 Pre. 2 & 3.
 b, Cookery in detail giving more time to each branch than possible in (3). Every day, 9:30 to 11:30. R. 81.
8. III.—Cooking, b, 60. Full.
 Pre. 6.
 b, Preserving and pickling fruits, preparation of entrees. Every day, 2:00 to 4:00. R. 81.
9. IV.—Cooking, b, 60, Full.
 Pre. 8.
 b, Fancy cooking, menus, practice with chafing dish and dainty ways of serving food. Every day, 8:30 to 10:30. R. 81.
10. III.—Household Sanitation, a, 30. Half.
 Pre. 2.
 a, Lectures on proper house planning, ventilation and plumbing, care of sleeping rooms, arrangements for sickness and the care of invalids. Mo., We. & Fr., 8:30 to 9:30. R. 84.



PRESIDENT'S OFFICE.

ECONOMICS AND PHILOSOPHY.

Ec.

The studies of this department are intended to introduce the student into the field of philosophy and social sciences; to help him form the habit of close, careful and logical analysis and reasoning; to become interested in considering questions of a subjective character and those which pertain more especially to his own rational nature and the organism of the state. The work is begun by a study of Psychology from a Biological standpoint. Man as an individual is first considered and then as a part of the organism of society where he becomes a factor in the social and political forces of the world.

The library and laboratories of the College are at the service of the students and every effort is made to illustrate and make emphatic the important truths discussed in classes and laboratories.

Text books are used when they are found to be of real service, but the chief instruction is given by lectures, and class discussions based on assigned readings and original and individual work of students.

Heston.

1. II.—Elementary Psychology, a, 30. Half.

Pre. Eh. 6, Ms. 6 or 7, Bt. 2, Zo. 3, Ph. 5, Ch. 2, and Hi. 3.

- a, Study of nervous mechanism at the disposal of the mind. Discussion of various phases of mental activity. Special attention given to cultivation of mental faculties and will power. Lectures and discussions.

Mo., We. & Fr., 8:30 to 9:30. R. 1.

Halleck's Psychology and Psychic Culture.

2. II.—Economic Theory, a, 60. Full.

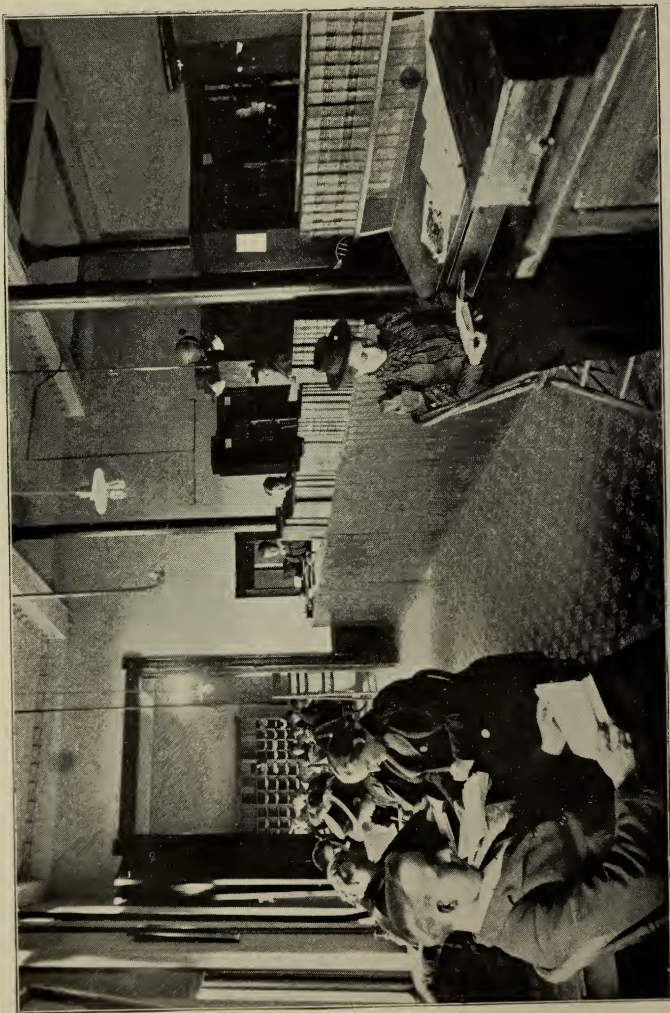
Pre. 1.

- a, The fundamental principles of economics, discussions based on text book and collateral readings. Special efforts made to form habits of clear economic analysis and sound judgment.

Every day, 9:30 to 10:30. R. 1.

Davenport's Outlines of Economic Theory.

3. IV.—Ethics, a 30. Half.
 Pre. 2.
 a, Source of ethical principles, grounds of governmental authority. Discussions on conduct of individuals and nations. Informal lectures and collateral readings.
 Hickok's Moral Science. Tu., Th. & Sa., 10:30 to 11:30
4. III.—Sociology, a 30. Half.
 Pre. 3.
 a, Study of the elementary principles of the social organism. The psychology of society in fashions, mobs, and riots. The forces in society considered, such as national ideals, public opinions, creeds. Tu. Th. & Sa., 9:30 to 10:30. R. 5.
 Gidding's Outlines of Sociology.
- Hi. 7. IV.—International Law, a, 30. Half.
 Harding.
5. IV.—Public Finance, a, 30. Half.
 Pre. 4.
 a, Methods of financial administration. Special attention to American financial problems and to municipal finances, revenues from franchises. Lectures and discussions.
Tu. Th. & Sa., 2:00 to 3:00. R. 1.
6. III.—Banking and Money, a, 30. Half.
 Pre. 5.
 a, The function of banks, credit, bank notes, bank reserves, bank interest, clearing houses, history of banking, international money, effects of legal tender, rise of prices of 1850—1873, the monetary controversy. Plan of work will be discussions, assigned topics and references.
Tu., Th. & Sa., 2:00 to 3:00. R. 1.
 Dunbar's Theory and History of Banking.
 Walker, Jevons, Mill and other standard authorities.
- Hi. 4. IV.—English Constitutional History, a, 60. Full.
- Hi. 5. III.—Constitutional Law, a, 30. Half.
- Hi. 6. IV.—Municipal Government, a, 30. Half.



DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE.

Eh.

The aim of the work in English is two-fold: First, to secure accurate, vigorous and graceful expression of thought. Second, to cultivate a taste for good literature.

Folsom.

1. **II.—English Words, a, 60.** **Full.**
 - a, A study of Anglo-Saxon, Latin, French and Greek derivatives and synonyms. This course is designed to form an intermediate step between grammar and rhetoric, and aims to make the student familiar with the elements entering into the growth and present use of the English language.
Every day, 10:30 to 11:30. R. 25.
Anderson's Study of English Words.
2. **III.—Rhetoric a, 60.** **Full.**

Pre. 1.

 - a, Principles of style conducive to logical, accurate and effective expression of thought; frequent original essays and practical exercises. Every day, 10:30 to 11:30. R. 25.
Genung's Outlines of Rhetoric, Part 1.
3. **IV.—Rhetoric, a, 60.** **Full.**

Pre. 1 & 2.

 - a, Continuation of course 2, principles of invention, sentence structure, paragraph structure and planning essays. One essay each week. Every day, 9:30 to 10:30. R. 25.
Genung's Outlines of Rhetoric, Part II.
4. **II.—Literature, a, 60.** **Full.**

Pre. 1, 2 & 3.

 - a, Advanced course in essay writing. Three essays and frequent exercises; lectures on principles pertaining to exposition and argumentation. English prose. The student is required to formulate the theme, to make analysis and study the elements and qualities of style in each of the following: Webster's second "Battle of Bunker Hill" oration; Burke's "On Conciliation with America"; Carlyle's "Essay on Burns."
Every day, 2:00 to 3:00. R. 25.
5. **III.—American Literature, a, 60.** **Full.**

Pre. 1, 2, 3 & 4.

 - a, Brief summary of the greater movements in the history of

American literature; study of Lowell, Whittier, Longfellow, Hawthorne and Emerson; themes on topics assigned.

Every day, 8:30 to 9:30. R. 25.

Brooke's Primer of American Literature.

Riverside Series of Selections.

6. IV.—Shakespeare and the Drama, a, 60.

Full.

Pre. 1, 2, 3, 4 & 5.

- a, Plays studied in class: Merchant of Venice, Julius Caesar, Macbeth, Hamlet. Lectures on principles of dramatic literature from the standpoint of character and plot and the contrast of classic and romantic dramas. Topics for themes are assigned early in the course and reported upon at the close of the quarter. Every day, 8:30 to 9:30. R. 25.

Hudson's School Edition of Shakespeare.

7. II.—Literature of the Romantic Period, a, 60.

Full.

Pre. 1, 2, 3, 4, 5 & 6.

- a, Lectures on greater ideas active in the time; study of poems of Wordsworth, Shelley, Keats, Scott, Coleridge and Burns. Themes on topics assigned. Every day, 8:30 to 9:30. R. 25.

Astor Edition of the Poets.

8. III.—Browning, a, 60.

Full.

Pre. 1, 2, 3, 4, 5 & 6.

- a, Lectures on his philosophy, christianity and art principles. Study of groups of poems illustrating these; themes on topics assigned. Every day, 9:30 to 10:30. R. 25.

Browning's Poems (complete).

9. IV.—Tennyson and the Victorian Poets, a, 60.

Full.

Pre. 1, 2, 3, 4, 5 & 6.

- Study of characteristics of the Victorian age and a careful study of Tennyson as its representative poet.

Every day, 10:30 to 11:30. R. 25.

Tennyson's Poems (Astor edition).

10. II, III & IV.—Elocution, a, 10.

Sixth.

Pre. 1, 2 & 3.

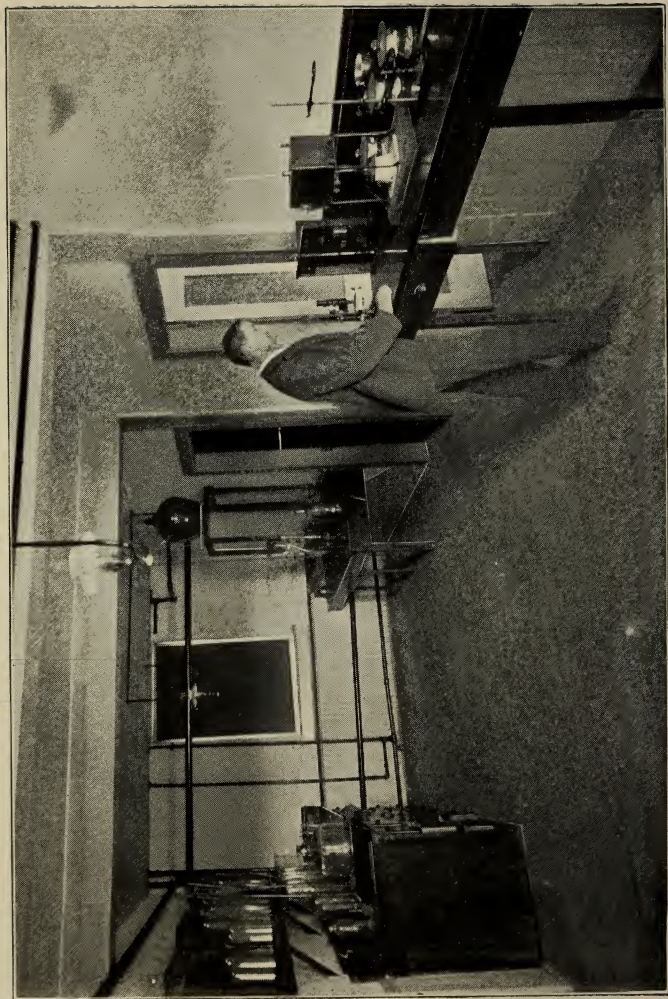
- a, Vocal and physical drill looking to the improvement of the student's ability to speak effectively. Year's work credits half course. Quars. II, III & IV, Tu., 11:30 to 12:30.

11. II, III & IV,—Oratory, a, 10.

Sixth.

Pre. 1, 2, 3, 4, 5, 6 & 10.

- a, Completion and delivery before the class of one oration each quarter. Short talks on great orators. Year's work credits half course. Quars. II, III & IV, Sa., 11:30 to 12:30



SALT DEVICES LABORATORY

DEPARTMENT OF GEOLOGY AND AGRONOMY.

Gl.

In offering the work of this department two objects are sought. First, to give all candidates for B. S. degree a thorough understanding of the foundation principles of the subject. Second, to afford an opportunity for students desiring to become specialists along any line of agriculture, to make a thorough study of the soil, its relations to plant growth and crop production. The basis of all the work is Physical Geography which is required as a preparatory study. Especial effort is made in courses 1 and 3 to train the student in habits of close observation of the various common natural phenomena and to acquaint them with the geological history, climatic conditions and natural resources of the state as well as to give a general knowledge of Geology. Advantage is taken of the collections of geological specimens in the study of the earth's formation, as well as of the various charts, globes and other instruments belonging to this and other departments, available for instructional purposes.

Students upon completing course 1 may elect the work in soil physics and kindred subjects, this work is available to those making agriculture their major. The various laboratories, literature and work of the Experiment Station is taken advantage of as illustrative of modern methods in conducting work along these lines. In this as in other departments ample latitude is given the student to specialize in the work best suited to his tastes, training and needs. The following courses are offered.

Chilcott.

1. I & II.—Elementary Geology, a, 30, Half.

a, Introduction to structural, dynamic and strateographic Geology. Lectures illustrated by the stereopticon.

Tu., Th. & Sa., 8:30 to 9:30. R. 93.

Tarr's Elementary Geology.

2. II.—Soil Physics, a, 30; b, 30. Full.

Pre. 1.

a, Physical properties of soils, supply of food to the growing

plant, soil moisture, soil temperature, tillage, nitrification and fertilizers.

Mo., We. & Fri., 10:30 to 11:30. R. 93.

- b, Microscopic examination of soils, mechanical analysis by "beaker method," determination of organic matter, capillary effects upon soil of the application of direct and indirect manures. Tu., Th. & Sa., 2:00 to 4:00. R. 93.

King's Soils.

3. IV.—Geology, a, 60.

Full.

Pre. 1.

- a, Geological ages, stratified, igneous and sedimentary rocks, crystallography, dip, folds, cleavage, volcanoes, rivers, glaciers, erosion and deposition. Every day, 8:30 to 9:30. R. 93.
LeConte's Elements of Geology.

4. II.—Soil Fertility, a, 30.

Half.

Pre. 2.

- a. A study of manures and manuring. Nitrification, leguminous crops for green manuring. Conservation of fertility by rotation of crops. Economic sources of the elements of fertility. Mo., We. & Fr., 9:30 to 10:30. R. 93.
Aikman's Manures and Manuring.

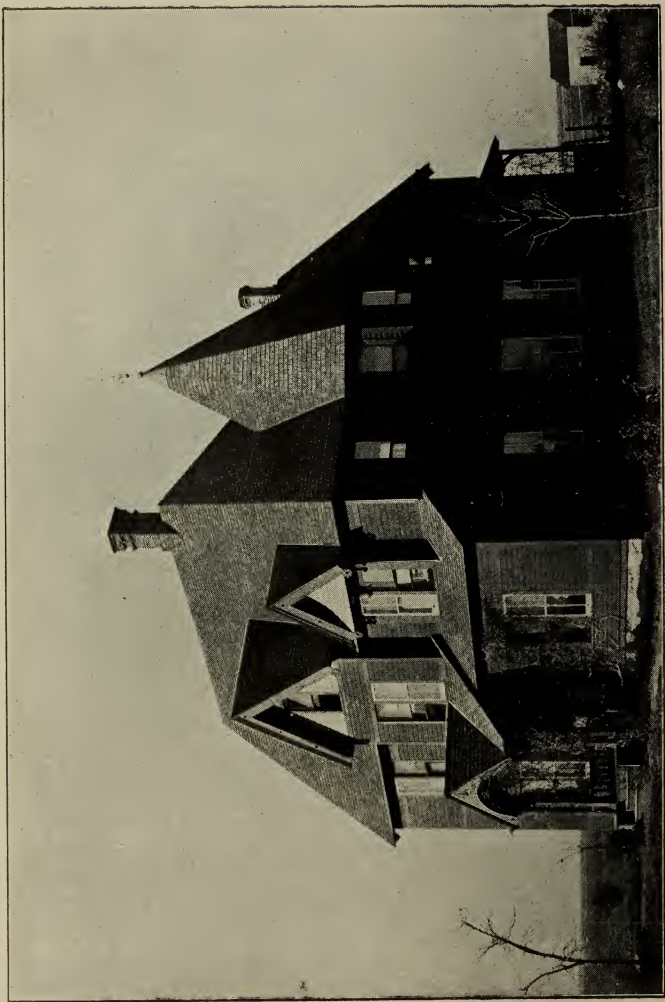
5. IV.—Agricultural Experimentation, b 30.

Half.

Pre. 1, 2, 3 & 4.

- b, A general study of experimental work as pursued by the experiment stations of this country, study of the bulletins and reports of the various stations and a comparison of their results and methods. Tu. Th., & Sa., 2:00 to 4:00, R. 93.

Experiment Station Record. U. S. Department of Agriculture and Experiment Station publications.



GIRLS' COTTAGE.

DEPARTMENT OF HISTORY AND CIVICS.

Hi.

The design of the work in history and political science is to give, in conjunction with the instruction in economics and social sciences, that information and training which are requisite to intelligent citizenship; to aid the student in acquiring a scientific method of investigation, accumulating, and using historical data; to enable him to trace the genesis, development and growth of political institutions; and especially to awaken in the student an enthusiasm for personal individual effort. Particular pains are taken to send students to original sources of information so far as possible. With a view to teaching the right use of books, constant use of the library collections will be required and encouraged in all the higher courses. Careful training in the use of the historical sources is given in courses 1 and 2. The topical and laboratory methods are for the most part adopted, as best calculated to develop the individual powers of the student. Courses 1 to 3 should precede all other work in the department.

Harding.

1. III.—General History, a, 60. Full.

Pre., Eh, 3.

- a, History of Greece and Rome with brief preliminary survey of Oriental history; readings, class discussions, careful training in the use of historic sources and in the preparation of historic papers. A study of typical institutions and events as the chief basis of true historic judgment.

Every day, 9:30 to 10:30. R. 1.

Meyer's General History.

2. IV.—General History, a, 60. Full.

Pre. 1.

- a, Continuation of 1. Study and emphasis of institutions of the middle ages, reformation and renaissance periods, rise and development of modern nations.

Meyer's General History. Every day, 9:30 to 10:30. R. 1.

3. III.—American History, a, 60. Full.

Pre. 2-

- a, Consideration of the financial, political and industrial events between 1765 and 1865 as bearing on the growth of union and the development of nationality with especial stress on the critical periods in the nation's history. Lectures, discussions

- readings, topical investigations and analytical study of sources. Every day, 8:30 to 9:30. R. 1.
Channing's Students' History of the United States.
4. IV.—English Constitutional History, a, 60. Full
Pre. 3.
a, Development and present conditions of English political institutions, preceded by outlines of Anglo Saxon and Feudal governments. Special attention given to those features most closely related to the growth of American institutions. Macy's English Constitution. Every day, 8:30 to 9:30. R. 1.
5. III.—Constitutional Law, a, 60. Full.
Pre. 3 and Ec. 2.
a, Sources of the Federal Constitution, structure and nature of the government of the United States, local and municipal governments in their relation to state and nation. Naturalization suffrage, citizenship and state administration. Lectures, class discussions, assigned topics and collateral readings. Every day, 10:30 to 1:30. R. 1.
6. IV.—Municipal Government, a, 30. Half
Pre. 1 and 3 & Ec. 2, with 5 recommended.
a, City in its relation to the state, English and continental cities, comparative study of American city governments, municipal activity and corruption, the Tweed ring, ownership of municipal franchises, municipal problems and suggested remedies. Discussions, reports and papers.
Mo., We. & Fr., 2:00 to 3:00. R. 1.
Goodnow's Municipal Home Rule.
References to Shaw's works and current literature.
- Ec. 6. III.—Banking and Money, a, 30. Half
- Ec. 5. IV.—Public Finance, a, 30. Half
Heston.
7. IV.—International Law, a, 30. Half
Pre. 5.
The sources of international law examined, study of prominent treaties. Lectures on treaty making and national comity with class discussions.
Mo., We. & Fr., 10:30 to 11:30. R. 5.
Lawrence's International Law.
Pratt.
- Mu. 9. IV.—Musical History, a, 30. Half
Saunders, A. R.
- Ae. 9. III.—Architectural History, a, 30. Half



IN THE GREEN HOUSE.

DEPARTMENT OF HORTICULTURE AND FORESTRY.

Mo.

In the regular college work these subjects are taught as an applied science as well as an art, full use being made of the student's attainments in the sciences underlying the practice of horticulture. The variation of cultivated plants, and the principles and methods of their development under the hand of man, are considered, as well as their propagation and cultivation. Field and laboratory exercises emphasize the lessons taught in the class room. Ample means of practical illustration are afforded by the eighty acres of the experiment station, horticultural grounds, and college campus, gardens, nurseries and greenhouses. The commercial nursery course is intended as a short course for those desiring only special work along this line. The following work is offered:

2. III.—Pomology, a, 40; b, 20. Full.
 - a, History, characteristics, propagation and management of orchards and small fruits with special reference to prairie conditions. Mo., Tu., Fr. & Sa., 10:30 to 11:30. R. 120.
 - b, Laboratory and field practice in grafting room, orchard, and nursery. We. & Th., 2:00 to 4:00. R. 120.
3. IV.—Olericulture or Vegetable Gardening, a, 40; b, 20. Full.
 - a, History and cultivation of the leading market vegetables and the construction and management of hotbeds and greenhouses. Mo., Tu., Fr. & Sa., 8:30 to 9:30. R. 120.
 - b, Practice work in greenhouse and garden. Green's Vegetable Gardening. We. & Th., 2:00 to 4:00. R.
4. I & III.—Floriculture & Home Gardening, a, 40; b, 20. Full.
 - a, Lectures on the propagation and management of house plants, hardy annuals, ornamental trees and shrubs, vegetables, small fruits and orchard fruits. Designed for ladies. Quars. I & III, Mo., Tu., Fr. & Sa., 2:00 to 3:00. R. 120.
 - b, Practice in greenhouse & gardens. Quars. I & III, We. & Th., 2:00 to 4:00.
5. I & III.—Landscape Gardening, a, 10; b, 20. Half.
 - a, The beautiful in nature, gardening as one of the fine arts, historical development of the ancient or geometric, and the modern or natural styles, best ornamental trees, shrubs and plants; hedges, lawn making, walks and drives. Illus-

trated with several hundred photographic views from different parts of America and Europe.

Quar. I, Mo., 10:30 to 11:30. R. 120.

Quar. III, Mo., 9:30 to 10:30. R. 120.

b, Drawing plans and laying out public and private gardens and ornamental grounds. We. & Th., 2:00 to 4:00. R. 120.

6. IV.—Advanced Horticulture, a, 40; b, 20. Full.
Pre. 1, 2 4 and 5.

a, Variation of plants under the hand of man, the modification and amelioration of plants by cultivation, soils, climate, selection and hybridization. Plant physiology from an horticultural standpoint.

Mo., Tu., Fr. & Sa., 10:30 to 11:30. R. 120.

b, Field Studies. We. & Th., 2:00 to 4:00. R. 120.

7. III.—Forestry and Arboriculture, a, 40; b, 20. Full.

a, Principles of forestry, forestry economy, the influence of forests on climate, timber planting on prairies, European forestry methods as affected by prairie conditions, shelter belts, the propagation, cultivation, characteristics and uses of forest trees. Mo., Tu., Fr. & Sa., 8:30 to 9:30. R. 120.

b, Field exercises in the college and station experimental tree plantations. We. & Th. 2:00 to 4:00.

8. IV.—Advanced Forestry, a, 40; b, 20. Full.

a, Principles of government forestry service of European countries, modifications by western prairie conditions, recent legislation in American forestry.

Mo., Tu., Fr. & Sa., 9:30 to 10:30. R. 120.

b, Field Studies in forest plantations. We. & Th., 2:00 to 4:00.

9. I,—Horticultural Investigation, b, 60. Full.

b, Original investigation along some special line.

Every day 2:00 to 4:00. R. 120.

10. III.—Horticultural Investigation, b, 60. Full.

Continuation of 9. Every day 2:00 to 4:00. R. 120.

11. IV.—Horticultural Investigation, b, 60. Full.

Continuation of 10. Every day 2:00 to 4:00. R. 120.

SHORT COURSE IN HORTICULTURE.

(Jan. 7 to Mar. 17, 1899.)

Sp. III.—Commercial Nursery Course.

Lectures and practical work in the commercial propagation and nursery management of fruit trees, small fruits, forest trees, ornamental trees and shrubs; grafting, budding, pruning, cutting scions, packing grafts, making cuttings, and stratifying seeds.

All of Every day. R. 120.



INDUSTRIAL COLLEGIAN STAFF.

DEPARTMENT OF LANGUAGES.

Ln.

In offering increased work in language, the institution supplies a deficiency which has for some time been recognized. The student pursuing work along scientific or technical lines is virtually compelled to have some knowledge of either German or French, while the importance of Latin is recognized by almost every one.

The two years should be consecutive in whatever language the student elects. In such technical "majors" as architecture or engineering, French is advised, in most of the natural or biological sciences German will be found preferable, while in the more literary work Latin is the most appropriate.

The following work in Latin, German and French is offered, viz:

LATIN.

Asst. in Ln.

1. II.—Latin, a, 60. Full,
Pre. Eh. 3.

a, Declension and Conjugation endings, translation and construction of easy sentences, command of vocabulary necessary for reading Caesar.

Every day 8:30 to 9:30. R. 5.

Bellum Helevticum.

2. III.—Latin, a, 60. Full,
Pre. 1.

a, Continuation of 1 more attention to grammar, important rules of syntax carefully studied.

Every day 8:30 to 9:30. R. 5.

Bellum Helveticum.

3. IV.—Latin, a, 60. Full,
Pre. 2.

a, Exercises in sight translation. Continuation of syntax and easy latin prose composition.

Every day 8:30 to 9:30. R. 5.

Vive Romae Illustres.

4. II.—Latin (Caesar) a, 60. Full.
Pre. 3.
a, Selections from Caesar, thorough study of Latin Grammar. Every day 10:30 to 11:30. R. 5.
Arrowsmith's Caesar.
Allen and Greenough's Latin Grammar.
5. III.—Latin (Virgil) a, 60. Full.
Pre. 4.
a, Selections from Virgil read, thorough study of latin grammar continued, different styles of latin poetry critically studied. Every day, 10:30 to 11:30. R. 5.
6. IV.—Latin (Scientific) a, 60. Full.
Pre. 5.
a, Study of latin, as a derivative language, latin literature, use in civilization especially in scientific terms. Every day 10:30 to 11:30. R. 5.
- GERMAN.
7. II.—German, a, 60. Full.
Pre. Eh. 3.
a, Elementary grammar, acquiring a vocabulary, pronunciation, translation from English to German and German to English. Exercises in conversation, case endings, collateral readings. Every day 9:30 to 10:30. R. 11.
Joyne's Meissner's Grammar.
Anderson's Bilderbuch ohne Bilder.
8. III.—German, a, 60. Full.
Pre. 7.
a, German syntax, strong and weak declensions and their endings as modified for different properties translation into German, extension of vocabulary and collateral readings from selected stories. Joyne's Meissner's Grammar. Every day, 10:30 to 11:30. R. 11.
9. IV.—German, a, 60. Full.
Pre. 8.
a, Grammar continued, idioms and idiomatic expressions, synonyms, extensive translations and collateral readings. Joyne's Meissner's Grammar. Every day, 10:30 to 11:30. R. 11.

10. II.—German, a, 60. Full.
 Pre. 9.
 a, German readings and translations.
 Every day, 10:30 to 11:30. R. 11.
 Joyne's-Meissner's Grammar.
 Boisen's German Prose.
 Baumbach's Schwiegersohn, Heyse's Anfang und Ende,
 Goethe's Egmont.
11. III.—German, a, 60. Full.
 Pre. 10.
 a, German grammar and reading continued, German literature
 with principal difficulties of the language.
 Every day, 3:00 to 4:00. R. 11.
 Joyne's-Meissner's Grammar.
 Schiller's Wilhelm Tell, Goethe's Faust.
12. IV.—German (scientific), a, 60. Full.
 Pre. 11.
 a, A course of scientific German designed to familiarize students
 with the more common terms used in the sciences.
 Hirzel's Chemie, Haas's Geologie.
 Every day, 9:30 to 10:30. R. 11,
- FRENCH.
13. II.—French, a, 60. Full,
 Pre. Eh. 3.
 a, Pronunciation and grammar, translation of easy English
 sentences into French, elementary reading
 Every day, 8:30 to 9:30. R. 11.
 Edgren's French Grammar.
 Super's French Reader.
14. III.—French, a, 60. Full.
 Pre. 13.
 a, Grammar continued, reading.
 Every day, 8:30 to 9:30. R. 11.
 Super's French Reader, Joyne's French Fairy Tales.
 Edgren's French Grammar.

15. IV.—French a, 60. Full.
Pre. 14.
a, Grammar continued, idioms and syntax, irregular verbs
reading and composition.
Fountaine's *Fleurs de France*.
Edgren's *French Grammar*.
Every day, 8:30 to 9:30. R. 11.
16. II.—French, a, 60. Full.
Pre. 15.
a, Reading and translating selections from Victor Hugo's *Les
Miserables*, George Sand's *La Petite Fadette*, composition.
Every day, 2:00 to 3:00. R. 11.
17. III.—French, a, 60. Full.
Pre. 16.
a, Reading a classical French play, translations from English,
French composition and recitation exercises.
Corneille's *Le Cid* or Moliere's *L'avare* or Racine's *Athalie*.
Every day, 9:30 to 10:30. R. 11.
18. IV.—French (scientific), a, 60. Full.
Pre. 17.
a, Extracts from French scientific articles.
Every day, 2:00 to 3:00. R. 11.
Luquien's *La Science Populaire*.
Milne Edward's *Physiologie*.



CLASS IN GEOMETRY.

MATHEMATICS AND ASTRONOMY.

Ms.

The general work of this department is planned with the view of cultivating in the student habits of systematic and accurate thinking as well as of giving a knowledge of methods in dealing with the practical problems that may arise in college work and in future life. Independent effort is encouraged to the greatest possible extent, the solution of problems and original demonstrations forming an important part of each course. In mathematics, courses 1, 2, 3, 4, 5 and 6, mentioned below are required for graduation. In place of course 6, however, students are at liberty to elect course 7 together with courses 9 or 10 or Ae 2. In addition to these, other courses are offered for election, including the prerequisites required in the other departments, together with subjects designed primarily for students who may wish to pursue special work in mathematics.

In astronomy one course is required for graduation. This is intended to give such a knowledge of the science as an educated person should possess. A course in Practical Astronomy is also offered for election. The class room work of both these courses is supplemented by the use of the instruments in the observatory. These include a five inch equatorial telescope, a transit instrument, a sidereal clock and a chronograph. The following courses are offered:

Crane.

1. II.—Algebra, a, 60. Full.

- a, The fundamental operations, simple equations, factors and multiples.

Every day, 8:30 to 9:30. R. 94.

Milne's High School Algebra to p. 99.

2. III.—Algebra, a, 60. Full.

Pre. 1.

- a, Fractions, simultaneous equations of the first degree, involution and evolution.

Every day, 8:30 to 9:30. R. 34.

Milne's High School Algebra from p. 99 to p. 191.

3. **I & IV.—Algebra, a, 60.** **Full:**
 Pre. 2.
 a, Theory of exponents, radical quantities, quadratic equations, ratio and proportion.
 Milne's High School Algebra from p. 101 to p. 271.
 Every day, 8:30 to 9:30. R. 34.
4. **I & II.—Geometry, a, 60.** **Full.**
 Pre. 1.
 a, Fundamental concepts, triangles, parallels and parallelograms, quadrilaterals, limits, the circle, with numerous original demonstrations and problems.
 Every day, 10:30 to 11:30. R. 34.
 Phillips and Fisher's Elements of Geometry (abridged edition) to Book III.
5. **III.—Geometry, a, 60.** **Full.**
 Pre. 3 & 4.
 a, Proportional angles and lines, similar figures, areas, regular polygons, mensuration of the circle, with numerous original demonstrations and problems.
 Every day, 9:30 to 10:30. R. 34.
 Phillips' and Fisher's Elements of Geometry (abridged edition) Book III to Book VI.
6. **IV.—Trigonometry, a, 60.** **Full.**
 Pre. 3 & 5.
 a, The trigonometric functions, analytically and graphically; the use of logarithms, the solution of right and oblique triangles, spherical trigonometry with practical problems in plane and spherical trigonometry. Every day, 10:30 to 11:30. R. 34.
 Wentworth's Trigonometry and Surveying.
7. **I.—Trigonometry (plane) a, 30.** **Half.**
 Pre. 5.
 The trigonometric functions, analytically and graphically, the use of logarithms, the solutions of right and oblique triangles. Quar. I, First half, every day, 3:00 to 4:00. R. 34.
 Wentworth's Trigonometry and Surveying.
9. **III.—Algebra, a, 30.** **Half.**
 Pre. 3.
 a, A review of the quadratic equations, the progressions, imaginary quantities, inequalities, permutations and combinations, the binomial theorem, logarithms,
 Mo., We. & Fr., 10:30 to 11:30. R. 34.

10. III. Solid Geometry, a, 30. Half.
 Pre. 5.
 a, The plane, diedral and polyedral angles, the prism and cylinder, the pyramid and cone and the sphere.
 Tu., Th. & Sa., 10:30 to 11:30. R. 34.
 Phillips and Fisher's Elements of Geometry (abridged edition.)
 Ae. 2. I. & II.—Surveying, a, 10; b. 20. Half.
 Brown.
11. IV.—Analytic Geometry, a, 60. Full.
 Pre. 6, 9 & 10.
 a, The point, right line, the conics, the general equation of second degree.
 Every day 10:30 to 11:30. R. 33.
 Nichol's Analytic Geometry.
12. II.—Differential Calculus, a, 60. Full,
 Pre.
 a, The differential coefficient, the formulae of differentatiation, the expansion of functions, successive and partial differentiation, indeterminate forms, tangents and normals, radius of curvature, evolutes and involutes, envelopes, maxima and minima.
 Every day 9:30 to 10:30. R. 33.
 Osborne's Differential and Integral Calculus.
13. III.—Integral Calculus, a, 60, Full.
 Pre. 12.
 a, Integration as the inverse operation of differentiation, integration of rational fractions, integration by rationalization, by substitution, reduction formulas, integration as a summation, rectification of curves, areas and volumes with numerous problems.
 Every day 10:30 to 11:30. R. 33.
 Osborne's Differential and Integral Calculus.
14. IV.—Analytic Mechanics, a, 60. Full.
 Pre. 13
 a, The application of analytic geometry and the differential and integral calculus to the problems of mechanics. The laws of equilibrium, motion. work and energy of particles and rigid bodies.
 Every day 8:30 to 9:30. R. 33.

15. II.—Analytic Mechanics, a, 30. Half.
Pre. 14.
a, A continuation of course 14. Lectures with references.
Mo., We. & Fr., 8:30 to 9:30. R. 33.
16. II.—Determinants, a 30. Half.
Pre. 9.
Tu. Th. & Sa. 8:30 to 9:30. R. 33.
Hanus's Elements of Determinants
17. III.—Advanced Analytic Geometry, a, 60. Full.
Pre. 11 & 16.
a, The general equation of the second degree; the analytic geometry of space, the point, plane straight line, surfaces of the second order.
Every day 9:30 to 10:30. R. 33.
18. IV.—Theory of Equations, a, 60. In 1899. Full.
Pre. 9.
Every day 3:00 to 4:00. R. 33.
Burnside and Panton's Theory of Equations.
19. III.—Differential Equations, a, 60. In 1900. Full.
Pre. 13.
Every day 8:30 to 9:30. R. 33.
Johnson's Differential Equations.
20. I & IV.—Astronomy, a, 60. Full.
Pre. 6 or 7.
a, Astronomical instruments, astronomical coordinates, the earth, moon and sun; the planets, fixed stars and constellations; observations and measurements with the equatorial and the transit instruments.
Quar I. Every day, 9:30 to 10:30. R. 34.
Quar. IV. Every day 9:30 to 10:30. R. 33.
Young's Elements of Astronomy.
21. II.—Practical Astronomy, a, 30; b, 30. Full.
Pre. 6 & 20.
a, Astronomical problems; use of ephemeris.
Mo., We & Fr. 10:30 to 11:30. R. 33
b, Computations from data obtained by observations with instruments in the observatory. At night.



SOME COLLEGE BUILDINGS.

DEPARTMENT OF MILITARY SCIENCE.

Mt.

The wisdom of the Federal law, requiring military instruction in land grant institutions is being practically illustrated in the war with Spain. The students and graduates of these colleges with military training were potent factors in putting the volunteer army into proper condition for actual service. The work of the institution consists of drill or recitations in United States Drill Regulations for nine quarters or as long as the student is connected with the college, and the other courses described below. No exemption from military duty is allowed in the case of male students, except upon excuse by the faculty for physical disability or other grave reasons. All the training is of such a nature as shall fit young men for the duties of officers. Members of the battalion, upon graduation, holding the highest military rank for this entire college work will be reported to the Adjutant General of the United States army who will publish their names in the Army Register. Cadets who have satisfactorily completed the work in military science will, upon graduating, be given a certificate of military proficiency.

The military equipments, consisting of arms, amunition and accoutrements, is furnished by the war department. Students taking military work are required to furnish for themselves a uniform as prescribed by the college at a cost not to exceed \$16 for each uniform. Students are required to wear this uniform during all military exercises and may wear the complete uniform at any other time. The following work is offered:

Trippe.

1. II.—Setting up Drill, b, 15.

Fourth.

b, Setting up exercises, military gymnastics, manual of arms.

Mo., Th. & Sa., 11:30 to 12:30. R. Armory.

2. III.—Drill, b, 15,

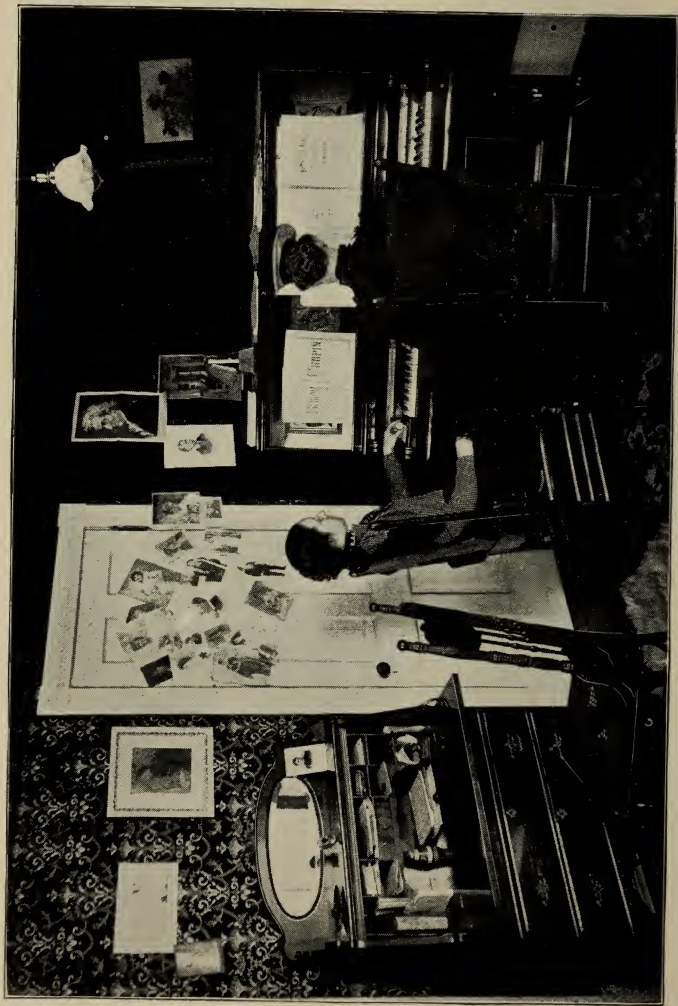
Fourth.

Pre 1.

b, Manual of arms.

Mo., Th., & Sa., 11:30 to 12:30. R. Armory.

- 3. IV.—Drill, b, 15. Fourth.**
 Pre. 2.
 b, School of the company.
 Mo., Th. & Sa., 11:30 to 12:30. R. Armory.
- 4. II.—Drill, b, 15. Fourth.**
 Pre. 3.
 b, School of the battalion.
 Mo., Th. & Sa., 11:30 to 12:30, R. Armory.
- 5. III.—Guard Duty, b, 15. Fourth.**
 Pre. 4.
 b, Recitations on guard duty.
 Mo., Th. & Sa., 11:30 to 12:30. R. 35.
- 6. IV.—Drill, b, 15. Fourth.**
 Pre. 5.
 b, School of company and battalion continued.
 Mo., Th. & Sa., 11:30 to 12:30. R. Armory.
- 7. II.—Drill, b, 15. Fourth.**
 Pre. 6.
 b, Target practice and school of battalion and company.
 Mo., Th. & Sa., 11:30 to 12:30. R. Armory.
- 8. III.—Drill Regulations, a, 30. in 1900. Half.**
 Pre 7,
 a, Recitations in United States Army Regulations.
 Mo. Th. & Sa., 11:30 to 12:30. R. 35.
- 9. IV.—Drill, b, 15. Fourth.**
 Pre. 8.
 b, General drill.
 Mo., Th., & Sa., 11:30 to 12:30. R. Armory.
- 10. III.—Art of War, a, 30. in 1899. Half.**
 Pre. 9.
 a, Lectures on military science and instruction of arms. Explosive mines, torpedoes, coast defences, bridges, and the principles of the art of war.
 Mo., Th. & Sa., 11:30 to 12:00. R. 35.
 Courses 1, 2, and 3 must be taken in the first years' attendance.



MUSIC STUDIO.

DEPARTMENT OF MUSIC AND PHYSICAL CULTURE.

Mu.

Although comparatively new the department is already fairly well equipped. Piano students are required to practice two hours a day. Good pianos are provided and students are expected to co operate in keeping them in perfect condition. Fifty cents per extra hour-quarter is charged. A tutor will take charge of all delinquents and look after the practice hours. The work in harmony and musical history is essential to a musical education. Violin and mandolin work is offered under a thoroughly competent instructor.

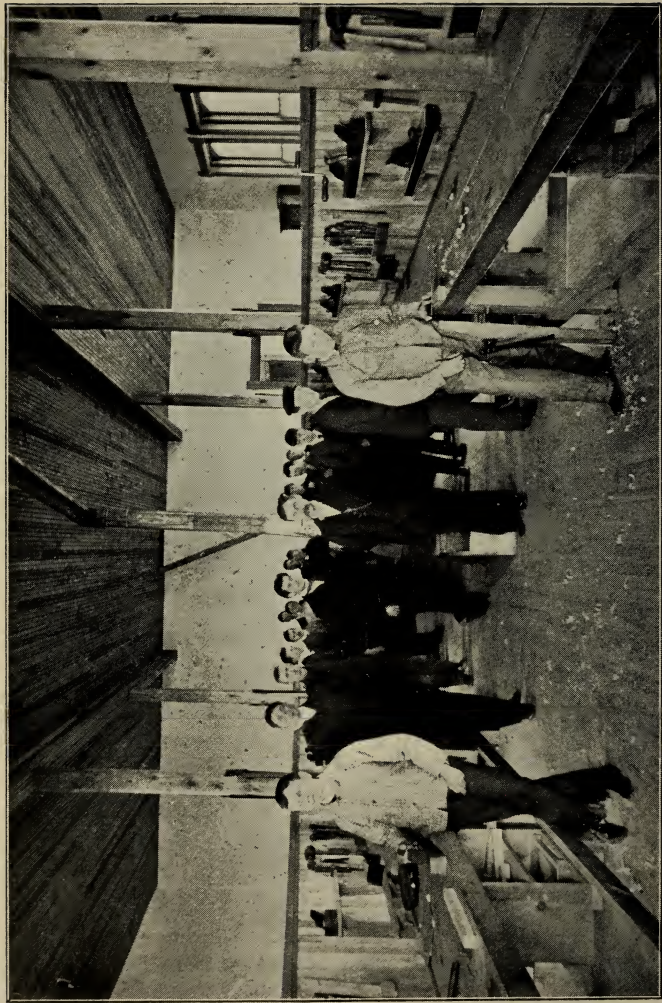
Pratt.

1. II, III & IV.—Chorus singing, a, 30. No charge. No credit.
Pre. Elementary knowledge of music.
 - a. Practice on sight singing, secular and sacred choruses.
11:30 to 12:30. Male, Tu. Mixed. Fr. Female, Sa. R. 70.
2. I, II, III & IV.—Piano, First Grade, a, 10. b, 50. Full.
 - a, Position of hand, special attention to touch, drill in reading, simple studies. Any day 8:30 to 9:30. R. 62.
 - b, Piano Practice. Any other day. R. 62.
National Graded Course.
3. I, II, III & IV.—Piano, a, 10. b, 50. Full.
 - Pre. 2.
 - a, Continuation of 2, touch and technic, velocity studies, duet ensemble practice.
Quar. I, any day 9:30 to 10:30. R. 62.
Quar. II, III and IV, 2:00 to 3:00. R. 62.
 - b, Piano Practice. Any other day. R. 62.
Czerny's Studies. Krause Trill Studies. Mason's Touch and Technic.
4. II, III & IV.—Piano (advanced) a, 10. b, 50. Full.
 - Pre. 2 & 3.
 - a, Bach's inventions, preludes and fuges, Clementi, Gradus ad Parnassum, Beethoven's Sonatas. Any day 10:30 to 11:30. R. 62.
 - b, Practice.
5. II, III & IV.—Voice Culture. a, 10. b, 50. Full.
 - a, Diaphragmatic breathing explained, perfect relaxation of the muscles of the face, throat and tongue, insisted upon, tone placing, vocal studies. Any day 9:30 to 10:30. R. 62.
 - b, Vocal practice. Any other day.
Bonoldi's vocal exercises.
6. II, III & IV.—Vocal re (advanced). a, 10. b, 50. Full.
 - Pre. 5.

- a, Continuation of methods in course 5, solo singing, special attention to enunciation. Any day, 9:30 to 10:30. R. 62.
- b, Practice. Any other day.
Bonoldi's vocal studies.
Voccai's studies.
7. II.—Harmony, a, 30. Half.
Pre. 3 or its equivalent.
- a, Scale construction, major and minor triads, chords of the 6th. and 7th. Mo., We. & Fr. 3:00 to 4:00. R. 70.
Emery's Elements of Harmony.
8. III.—Harmony, a, 30. Half.
Pre. 7.
- a, Chords of 5th. and 7th., modulations and simple melody and hymn writing. Mo., We. & Fr., 3:00 to 4:00. R. 70.
8. s. IV.—Musical History, a, 30. Half.
Pre. General History.
- a, History of music, including opera from the earliest times. Mo., We., & Fr., 3:00 to 4:00. R. 70.
Filmore's Musical History.
10. II, III & IV.—Physical Culture, b, 10. Mo. & Th. Sixth.
Husted.
11. II, III & IV.—Violin, a, 10; b, 50. Full.
Pre. Elements of music.
- a, Position, exercise in bowing, graded exercises in fingering.
- b, Practice.
12. II, III & IV.—Violin, a, 10; b, 50. Full.
Pre. 11.
- a, Continuation of work from 11. Exercises in various keys, easy duets by Pleyel and others, studies in expression and tone quality.
- b, Practice.
13. II, III & IV.—Violin, a, 10; b, 50. Full.
Pre. 11 & 12.
- a, More advanced work of 12. Positions, easy solos by popular composers. Studies in musical effects.
Time and room to be arranged with head of the department. Parallel courses with the above on the mandolin are offered.

PHYSICAL CULTURE.

Regular work in physical culture is required of every young lady twice a week Quarters II, III and IV. The aim of this work is to secure better carriage and more systematical development of body. The class work consists of free movement exercises with the dumb-bells and clubs, jumping and all other exercises.



WOOD WORKING SHOP.

DEPARTMENT OF MECHANICAL ENGINEERING.

Me.

The object of the work offered is to give the students a thorough training in the theoretical principles underlying the science of mechanics and machines and at the same time to enable them to become practically familiar with some of the numerous applications of these principles which are of such inestimable value to the human race.

The instruction is both theoretical and practical. The usual methods of text book study and lectures are employed, but the student is required to put into practice, as far as possible, the instruction which he receives. Hence the work of the class room is supplemented and practically exemplified by practice in shops. The student not only studies the theories of constructing and operating machinery, but in the drawing room he designs, and in the shops constructs and operates such machines. It is believed that those who complete a major in this department will be fitted to fill responsible positions in manufacturing establishments. It is important that mechanical students elect sufficient work in mathematics for their use in this department. It is important that French be elected as the language which is required in addition to English.

The work-shops are supplied with a large variety and quantity of tools. The wood shop is furnished with twenty sets of carpenter tools and with eight wood turning, and one pattern maker's lathe, a scroll saw and a complete set of tools for each. There is also a variety of special tools for wood working.

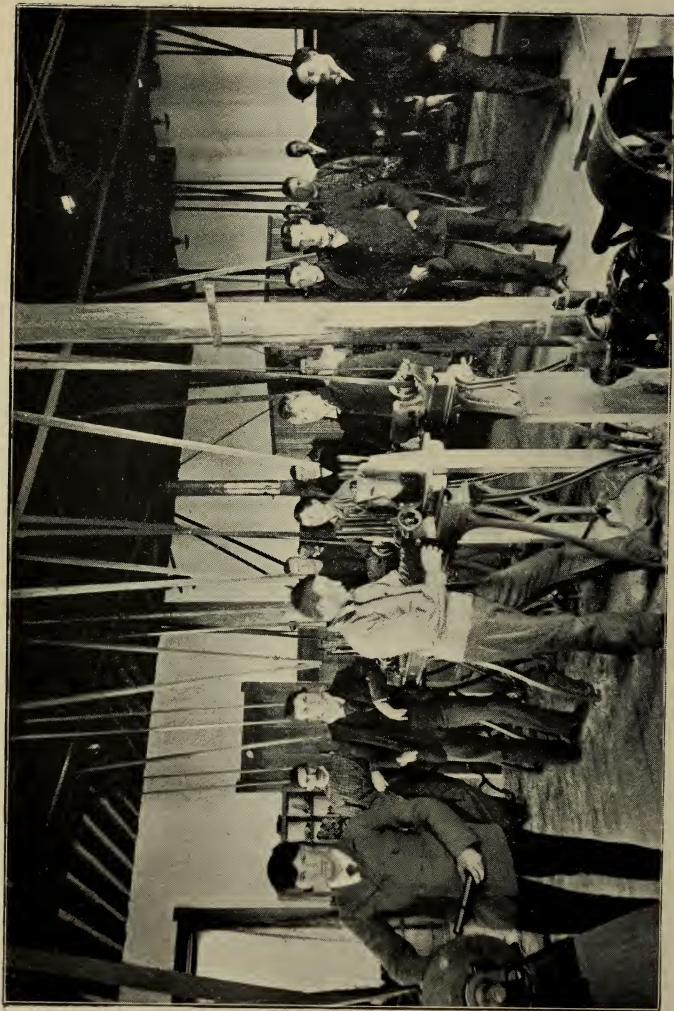
The blacksmith shop is furnished with engine lathe, planer, drill press, emery wheels and a great variety of hand tools. The machinery is driven by a 25 H. P. Atlas engine. A supply of instruments for testing work, such as indicators, planimeters and tachometers are at the disposal of the students of the department.

A large number of pictures, drawings and illustrative material has been recently added to the equipment through the liberality of manufacturers and friends of the college.

The following work is offered:

Young.

1. *III.—Carpentry, b, 30.* *Half.*
 b, Talks on the care and use of different tools. Practice at the bench in making the various joints used in wood construction. Mo., We. & Fr. or Tu., Th. & Sa., 2:00 to 4:00. R. 105
2. *II.—Forging, b, 30.* *Half.*
 b, Bending, drawing, upsetting, welding and forming iron. Mo., We. & Fr., or Tu., Th. & Sa., 2:00 to 4:00. R. 107.
3. *IV.—Machine Shops, b, 60.* *Full.*
 b, Filing, chipping and fitting, work with the different machines, such as lathes, planer and drill press. Every day, 2:00 to 4:00. R. 01.
4. *II.—Construction, b, 60.* *Full.*
 Pre. 12.
 a, Construction of some machine or appliance from designs made in drawing room. Every day, 2:00 to 4:00. R. 101.
5. *III.—Construction, b, 60.* *Full.*
 Continuation of 4. Every day, 2:00 to 4:00. R. 101.
6. *IV.—Practical Steam Engine, b, 60.* *Full.*
 b, Practice in running stationary, portable and traction engines. Every day, 2:00 to 4:00. R. 101.
17. *IV.—Wood-turning, b, 30.* *Half.*
 Pre. 1.
 b, Wood-turning in hard and soft woods. Mo., We. & Fr. or Tu., Th. & Sa., 2:00 to 4:00. R. 101.
18. *IV.—Forging (steel) b, 30.* *Half.*
 Steel manipulation, including cold chisels, punches and lathe and planer tools, tempering and hardening. Mo., We. & Fr. or Tu., Th. & Sa., 2:00 to 4:00. R. 107.
 Solberg.
7. *II.—Mechanical Drawing, b, 60.* *Full.*
 Pre. Ar. 1.
 b, Instrumental drawing, geometrical problems and parts of machines. Every day, 2:00 to 4:00. R. 106.
8. *III.—Machine Design, b, 60.* *Full.*
 Pre. 9 and Ms. 6 or 7.
 b, Solution of various problems involving the design of simpler parts of a machine. Every day, 2:00 to 4:00. R. 106.
 Klein's Machine Designs.
9. *II.—Elements of Mechanism, a, 60.* *Full.*
 Pre. Ms. 6 or 7.



MACHINE SHOP.

- a, Elements of machinery, velocity ratios, graphic representation of speed and acceleration. Motion transmitting parts, such as gears, belts, cams, screws, link work. Automatic feeds, parallel and quick return motions. Designing. Wood and Stahl. Every day, 9:30 to 10:30. R. 103.
10. II.—Descriptive Geometry b, 60. Full.
Pre. 7 or Ae. 1.
- b, Problems in projection. Every day 2:00 to 4:00. R. 106.
11. IV—Kinematics, a, 60. Full.
Pre. Ms. 6 or 7.
- a, Geometry of machinery, problems in the design of motion transmitting appliances. Every day, 8:30 to 9:30. R. 103.
12. IV—Engineering Design, b, 60. Full.
Pre. Ms. 6 or 7.
- b, Solutions in the drawing room of some practical problems in design and making working drawings of same. Every day, 2:00 to 4:00. R. 106.
13. IV.—Steam Engine, a, 60. Full.
Pre. 8 and 9.
- a, Study of the modern steam engine, slide valve, and when in combination with independent cut off valves, link motion and Zeuner diagrams, reciprocating parts and indicator practice. Every day, 9:30 to 10:30. R. 103.
Holmes' Steam Engine.
14. II.—Steam Boilers, a, 60. Full.
Pre. 13.
- a, Advantages and disadvantages of using the various forms of boilers, methods in construction, tubes and flues, plates, riveting, bracing, grate and heating surface, gauges and feed appliances, setting, care and operation. Every day, 10:30 to 11:30. R. 103.
Wilson and Flather's Steam Boilers.
15. III.—Strains in Framed Structures, a, 60. Full.
Pre. Ms. 6 or 7.
- a, Graphical determination of stresses under action of static, moving and wind forces. Every day, 8:30 to 9:30. R. 103.
Green, Vol. 1.
16. IV.—Strength of Materials, a, 30. Half.
Pre. 8 and Ms. 13.
- a, Strength of such materials of construction as wood, iron, and steel. Mo., We. & Fr., 10:30 to 11:30. R. 103.

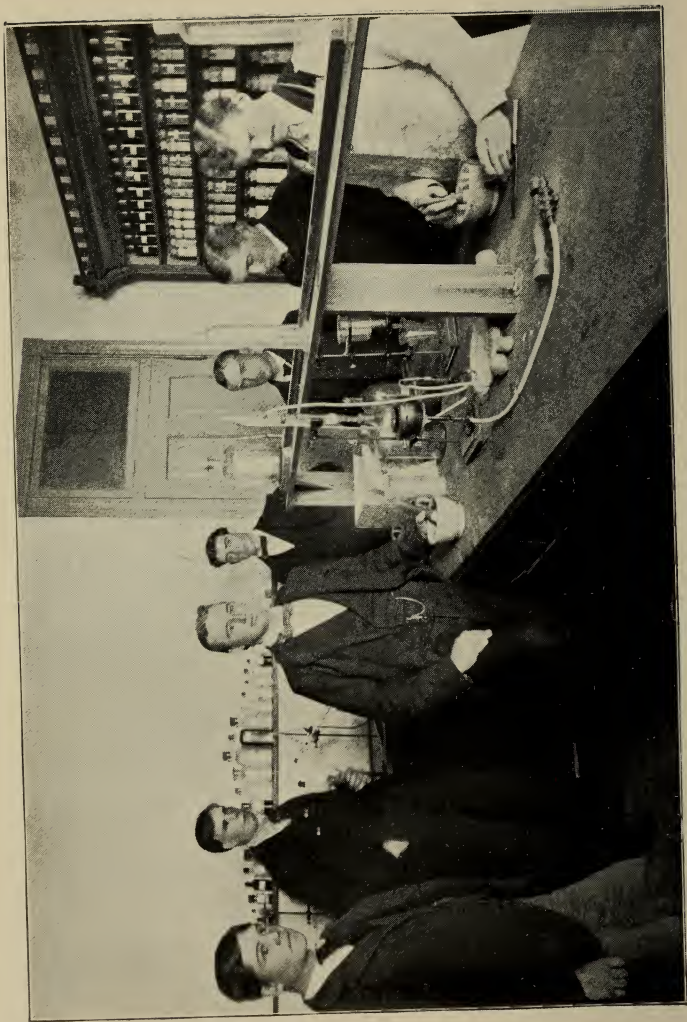
DEPARTMENT OF STEAM ENGINEERING.

Se.

Quars. II, III & IV (From Sept. 26, 1898, to June 3, 1899.

Modern agricultural methods have introduced, in such a marked degree, the steam engine as a substitute for animal power that the consequent growing demand for steam engineers has lead the college to arrange a one year course of study for the special training of steam (especially traction) engineers. Extreme care has been taken only to offer such work as shall prove valuable to the man running the traction engine or other machinery. A relatively large amount of shop work, engine repairing and engine running is introduced, with a proper proportion of recitations in closely allied subjects. Upon the satisfactory completion of this work the student is given a certificate which is virtually the same as a license in this state to run an engine.

Ph. 1.—Elementary Physics.		Full.
	Quar. II, 9:30 to 10:30.	R 55.
Ae. 5.—Farm Engineering.		Half.
	Quar. II, 10:30 to 11:30.	R 4.
Pr. 1.—Arithmetic.		Full.
	Quar. II, 8:30 to 9:30.	R 35.
Me. 7.—Mechanical Drawing.		Full.
	Quar. II, 2:00 to 4:00.	R 106.
Pr. 9.—Arithmetic.		Full.
	Quar. III, 8:30 to 9:30.	R 35.
Ph. 2.—Physics.		Full.
	Quar. III, 9:30 to 10:30.	R 55.
Pr. 10.—Civil Government.		Half.
	Quar. III, 10:30 to 11:30.	R 35.
Me. 2.—Forging (Engine Repairing), b, 60		Full.
	Quar. II, 2:00 to 4:00.	R 107.
Me. 6.—Practical Steam Engine.		Full.
	Quar. IV, 2:00 to 4:00.	
Me. 3.—(Special) Machine Shop, b, 60,		Full.
	Quar. IV, 4:00 to 6:00.	R 101.
Me.—(Special) Engine Calculations, a, 60.		Full.
	Quar. IV, 9:30 to 10:30.	R 106.
Pr. 5.—Physical Geography.		Full
	Quar. IV, 10:30 to 11.30.	R 93.



PHARMACEUTICAL LABORATORY.

DEPARTMENT OF PHARMACY.

Py.

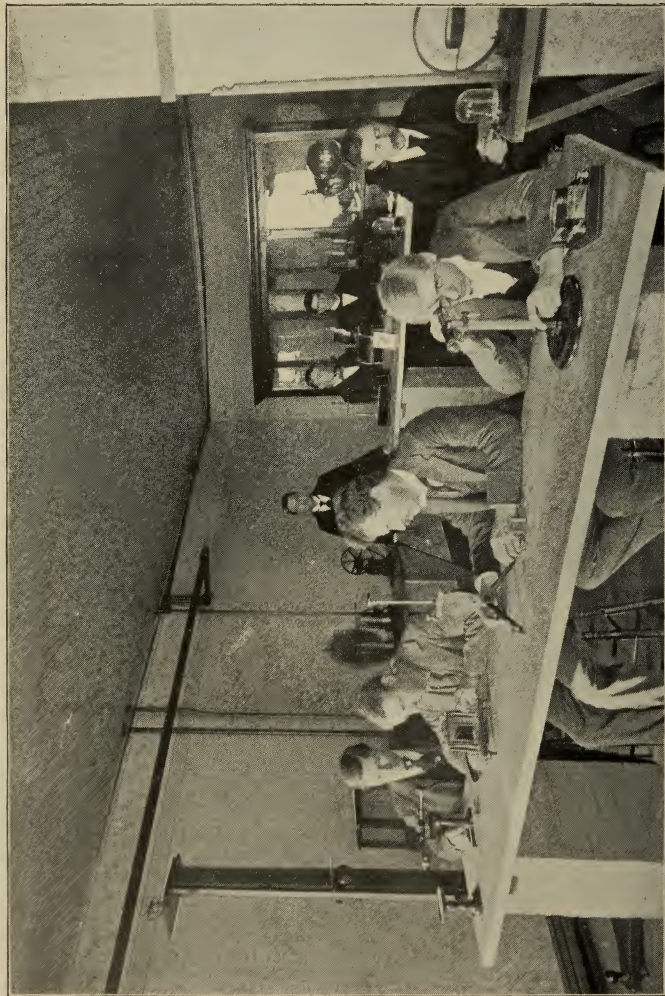
This work is primarily intended to thoroughly teach young men and women the science of Pharmacy. It also serves as an excellent preliminary training for students intending to enter the practice of medicine or dentistry. The student may upon completion of the courses mentioned on page 50 receive the Ph. G. degree, or by electing Py. as a major and Ch. or Bt. as minor, fulfill the requirements for B. S. degree. This is the only work of the kind offered in the state and receives the hearty commendation of the State Board of Pharmacy.

The department occupies rooms in close proximity to the chemical department and is well supplied with instructional apparatus. The following courses are offered:

Whitehead.

1. II—Scientific Latin, a, 60. Full.
Pre., Eh. 3—Ph. 2.
 - a, Subject is taught with special reference to its application to Pharmacy. The vocabulary employed is strictly pharmaceutical. Every day, 10:30 to 11:30. R. 1.
Robinson's Grammar of Pharmacy and Medicine, first 80 pages.
2. II.—Pharmacy, a, 60. Full.
Pre. Ch. 3.
 - a, Forms and uses of pharmaceutical apparatus, weighing by apothecaries and metric systems, specific gravity of solids and liquids, heating apparatus, determination of boiling and melting points, distillation, comminution, solution, precipitation, filtration, crystallization, percolation. Mo. Tu. Th. & Fr. 8:30 to 9:30 and We. & Sa. 3:00 to 4:00. R. 46
Remington's Practice of Pharmacy.
3. III—Pharmacy, a, 60. Full.
Pre. 2 and Ch. 4.
 - b, Preparations of waters, syrups, mucilages, etc., mentioned in the preceding course and must be taken in connection with it. Every day, 2:00 to 4:00. R. 43.
Remington's Practice of Pharmacy.
4. III.—Pharmacy, b, 60. Full.
Pre. 2 and Ch. 4.
 - a, Study of official medicines, waters, syrups, mucilages, mixtures, spirits, elixirs, linaments, infusions, tinctures, fluid extracts, oleoresins, extracts and official inorganic salts and compounds. Every day, 9:30 to 10:30. R. 5.

5. IV.—Pharmacy, a, 60. Full.
 Pre. Py. 3 & 4.
 a, Solutions, emulsions, powders, pills, ointments, plasters,
 reading prescriptions. Every day, 9:30 to 10:30. R. 5.
 Remington's Practice of Pharmacy.
6. IV.—Pharmacy, b, 60. Full.
 Pre. Py. 3 & 4.
 Compounding of prescriptions, making of solutions, emulsions,
 powders, pills, reading and compounding prescriptions.
 Must be taken same term as course 5.
Every day, 2:00 to 4:00. R. 43.
 Remington's Practice of Pharmacy.
7. IV.—Materia Medica, a, 60. Full.
 Pre. Py. 4.
 a, Medicinal properties, doses and poisonous effects of the various
 medicines, together with the antidotes which the pharmacist may be
 required to administer in an emergency will receive full and careful
 treatment.
Every day, 10:30 to 11:30. R. 46.
 Wilcox and White.
8. II.—Materia Medica, a, 60. Full.
 Pre. Py. 7.
 a, Continuation of course 7. Every day, 9:30 to 10:30. R. 5.
 Wilcox and White.
9. III.—Materia Medica, a, 60. Full.
 Pre. Py. 8.
 a, Continuation of courses 7 and 8.
Every day, 10:30 to 11:30. R. 42.
 Wilcox and White.
10. IV.—Drug Assaying, b, 60. Full.
 Pre. Py. 3 & 4.
 b, The drug assaying consists mainly in acquiring knowledge
 and practice in the preparation of official tests and volumetric
 solutions and in the quantitative determination of the alkaloids found
 in some of the crude drugs. A short course in urine analysis is
 given in connection with drug assaying.
Every day, 4:00 to 6:00. R. 43.
 Pharmacopœia, Lyon's Pharmaceutical Assaying and Allen's
 Organic Analysis.
11. III. Scientific Latin, a, 60. Full.
 a, Continuation of course 1. Every day, 8:30 to 9:30. R. 46.
12. IV.—Scientific Latin, a, 60. Full.
 a, Continuation of course 11. Every day, 8:30 to 9:30. R. 42.



ADVANCED PHYSICAL LABORATORY.

DEPARTMENT OF PHYSICS.

Ph.

The various courses are offered for three classes of students:

First:—Those who desire to take a scientific course where it would be necessary to take physics as a foundation subject.

Second:—Those wishing to gain some knowledge of the elementary principles of this subject in order to fit themselves for teachers of science in our high schools.

Third:—Those wishing to make physics their major subject.

From the fact that physics is one of the foundation sciences and that a knowledge of its laws is a necessity to every student seeking a scientific training, the department has been well fitted with room and appliances to provide this training. Its lecture room is well provided with arm-rest chairs. The advanced laboratories are provided with non-vibratory piers and opaque shutters for darkening the rooms for work in optics. Water, gas and electricity are provided for the recitation room, the dark room and the laboratories. Several volumes of reference books upon the various lines of physics are kept in the department for the use of students.

The laboratory equipment includes such expensive pieces as analytical balances, laboratory clock making electrical contact every second, spectroscope, stereopticon (arc light), Carhart-Clark standard cell, dynamo, electro-motor, galvanometers, induction coils, voltmeters, Wheatstone bridges, X-ray apparatus. The following is the list and the descriptions of the courses offered in this department.

Mathews, H. B.

I. II.—Elementary Physics, a, 40; b, 20.

Full.

Pre. with Ms. 1.

- a, Properties of matter, mechanics of solids, mechanics of fluids, sound and heat.

Mo., Tu., We., & Th., 9:30 to 10:30. R. 55.

- b, Laboratory work showing principal phenomena and proving laws governing them in properties of matter, mechanics of solids, mechanics of fluids, sound and heat.

Fr. & Sa., 2:00 to 4:00. R. 56.

Avery's Elementary Physics to chapter V.

Chute's Practical Physics—Laboratory Manual.

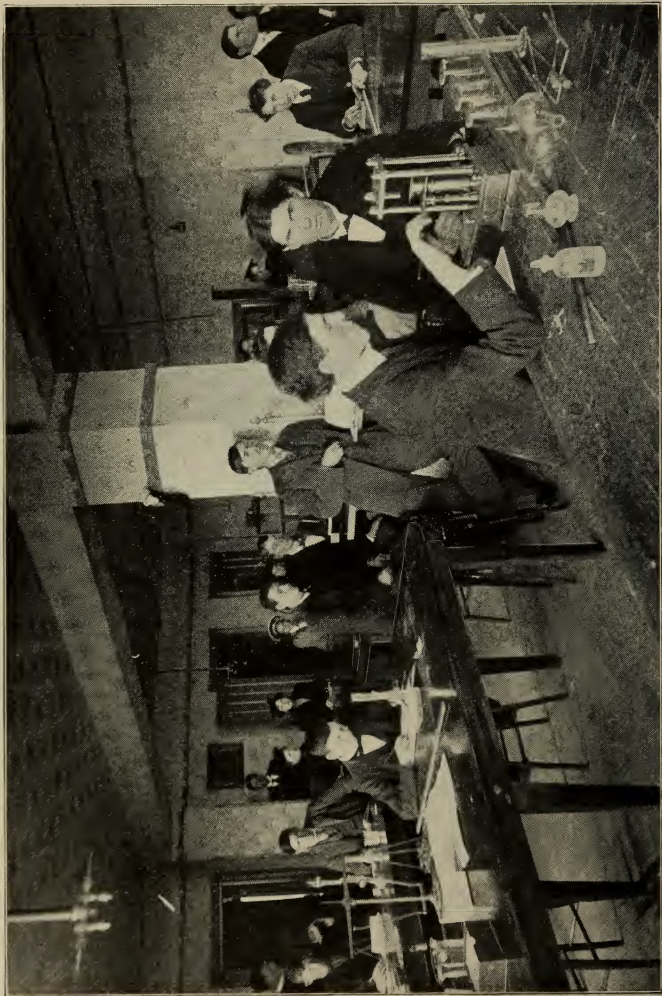
2. III.—Elementary Physics, a, 40; b, 20. Full,
 Pre. 1 and Ms. 1.
 a, Light, magnetism, static and current electricity.
Mo., Tu., Fr. & Sa., 9:30 to 10:30. R. 55.
 b, Laboratory work in refraction and reflection of light, color, magnetism, static electricity, arrangement of batteries, detection of the electric current and its direction, induced currents and measurements of electrical resistances.
We. & Th., 2:00 to 4:00. R. 56.
 Avery's Elementary Physics complete from chapter V.
 Chute's Practical Physics—Laboratory Manual.
3. I.—Elementary Physics, a, 20; b, 10. Half.
 a, Properties of matter, mechanics of solids, mechanics of liquids and gases, sound and heat
First half Quar., Mo., Tu., Th. & Fr., 9:30 to 10:30. R. 55.
 b, Laboratory work showing principal phenomena and proving laws governing them in properties of matter, mechanics of solids, mechanics of liquids and gases, sound and heat.
First half of Quar. We., & Sa., 2:00 to 4:00. R. 56.
 Avery's Elementary Physics, principal parts selected to Chap. V, Chute's Practical Physics.
4. I.—Elementary Physics, a, 20; b, 10. Half.
 Pre. 3.
 a, Light, magnetism, static and current electricity.
Last half of Quar. Mo., Tu., Th. & Fr., 9:30 to 10:30. R. 55.
 b, Refraction and reflection of light, magnetism, detection of the electric current and its direction, and measurement of electrical resistances.
Last half of Quar., We., & Sa., 2:00 to 4:00. R. 56.
 Avery's Elementary Physics from Chap. V.
 Chute's Practical Physics.
5. I & II.—Theory of Physics, a, 40; b, 20. Full.
 Pre. 1 & 2, Ms. 1, 2, 3, 4, 5 & 6 or 7.
 a, Mechanics of solids and liquids, heat, sound, light, magnetism and electricity.
Quar. I, Mo., Tu., Th. & Fr., 8:30 to 9:30. R. 55.
Quar. II, Mo., Tu., Th. & Fr., 10:30 to 11:30. R. 55.
 b, Exact measurements of mass, distance, time, calorimetry, velocity of sound, refraction and reflection of light, electrical resistance, voltage and current strength.
We. & Sa., 2:00 to 4:00. R. 56.
 Ames' Theory of Physics, Sabine's Laboratory Manual.

6. I & III.—Elementary Mechanics, a, 60. Full.
 Pre. 1 & 2, Ms. 1, 2, 3, 4, 5 & 6 or 7.
 a, Kinetics, dynamics, statics, friction, pendulum, simple machines with their sub-divisions and many practical examples. Quar. I, every day, 10:30 to 11:30. R. 55.
 Quar. III, every day, 8:30 to 9:30. R. 55.
 Dana's Elementary Mechanics.
7. II.—General Physics, a, 40; b, 20. Full.
 Pre. 1, 2 & 5; Ms. 6 or 7.
 a, Mechanics, kinematics, kinetics, mechanics of fluids, nature and motion of sound, physical theory of music, nature and propagation of light, refraction, reflection, interference, color and polarized light.
 We., Th., Fr. & Sa., 8:30 to 9:30. R. 55.
 b, Laboratory work and measurements covering topics mentioned in a. Mo. & Tu., 2:00 to 4:00. R. 56.
 Carhart's University Physics, Vol. I, Nichol's Laboratory Manual, Stewart and Gee, Glazebrook and Shaw.
8. III.—General Physics, a, 40; b, 20. Full.
 Pre. 1, 2, 5 & 7, and Ms. 6 or 7.
 a, Heat, thermodynamics, magnetism, electricity, electrolysis, induction currents, primary batteries, electric oscillations and waves. We., Th., Fr. & Sa., 10:30 to 11:30. R. 55.
 b, Laboratory work and measurements covering topics mentioned in a. Mo. & Tu., 2:00 to 4:00. R. 55.
 Carhart's University Physics, Nichol's Laboratory Manual, Stewart and Gee, Glazebrook and Shaw.
9. II.—Electricity and Magnetism, a, 40; b, 20. In 1899. Full.
 Pre. 1, 2, 5 & 8, and Ms. 12.
 a, Magnetism, static electricity, electric capacity, magnetomotive force, electro magnets, electro dynamometers, grouping of cells, methods of measuring magnetism, current strength, voltage and resistance, thermo-electricity, dynamo, alternators, accumulators and transformers.
 Mo., Tu., Fr. & Sa., 2:00 to 3:00. R. 55.
 b, Laboratory work on above topics.
 We. & Th., 2:00 to 4:00. R. 56.
 Thompson's Electricity and Magnetism.
 Gray's absolute Measurements in Electricity and Magnetism.
 Carhart's and Patterson's Electrical Measurements.

10. III.—Dynamo Electric Machinery, a, 40; b 20. In 1899. Full.
Pre. 9.
a, Theory, magnetic circuit, equation and computation of parts of dynamo, construction of armature and field magnets and types of dynamos. Mo., Tu., We. & Th., 2:00 to 3:00. R. 55.
b, Computation and construction of parts of small dynamo.
Fr. & Sa., 2:00 to 4:00. R. 56.
Thompson's Dynamo Electric Machinery.
Wiener's Dynamo Electric Machinery.
11. II.—Heat, a, 40; b, 20. In 1900. Full.
Pre. 8 and Ms. 12.
a, Sensible and latent heat, dynamical generation of heat, thermometry, calorimetry, specific heat, atomic and molecular heat capacities, evaporation, ebullition, vapor densities, cooling, diathermancy, conductivity and dynamical equivalent of heat. Mo., Tu., Fr. & Sa. 2:00 to 3:00. R. 55.
b, Laboratory work covering topics mentioned in a.
We. & Th., 2:00 to 4:00. R. 56.
Preston's Theory of Heat, Maxwell's Heat.
12. III.—Light, a, 40; b, 20. In 1900. Full.
Pre. 8, Ms. 12.
a, Shadows and images, spectrum, velocity of light, color, phosphorescence, fluorescence, diffraction, measuring waves, prisms and polarization.
Mo., Tu., We. & Th., 2:00 to 3:00. R. 55.
b, Laboratory work along same line as a.
Preston's Light. Fr. & Sa., 2:00 to 4:00. R. 56.

ELECTRICAL ENGINEERING.

While no complete arrangement of courses in this technical work is offered, the student desiring to prepare for it as a life work can well make Ph. his Major, selecting the work which shall give the best foundation knowledge of electricity making judicious use of other electives in Ms. and Me. and take one year technical work in some other good institution. This plan will be found desirable for many reasons, as it will have a tendency to give him a broader education, reduce the total expense and give intimate acquaintance with two institutions.



GENERAL PHYSICAL LABORATORY.

PREPARATORY DEPARTMENT.

Pr.

The work of this department is prerequisite to all the other courses offered, in other words, the student must take the work at this institution or present evidence of having taken it at some other institution. The students of this department are under the immediate charge of a member of the faculty who superintends their methods of work. If possible the student should perform the work of this year while in the common school. If the student is back in, not to exceed two of the Preparatory studies he may take those with the class and at the same time go on with his other work. The following is the preparatory work:

Husted.

1. II.—Arithmetic, a, 60. Full.

Pre. Arithmetic to fractions.

- a, Fractions, decimals, denominate numbers, literal quantities and proportion. Every day, 8:30 to 9:30. R. 35.

Bailey's Comprehensive Arithmetic from fractions to percentage.

9. III.—Arithmetic, a, 60. Full.

Pre. 1.

- a, Percentage, interest, involution, evolution and mensuration. Every day, 8:30 to 9:30. R. 35.

Bailey's Comprehensive Arithmetic, completed.

Asst. in Ln.

2. II.—English, a, 60. Full.

- a, Technical Grammar.

Every day, 9:30 to 10:30. R. 35.

Metcalf's Advanced Book from the beginning.

4. IV.—Elocution, a, 30. Half.

- a, Elementary drill in the subject.

Mo., We. & Fr., 3:00 to 4:00. R. 35.

8. III.—English, a, 60. Full.

Pre. 2.

- a, Continuation of course 2.

Every day, 9:30 to 10:30. R. 35.

Metcalf's Advanced Book continued.

11. IV.—English, a, 60. Full.

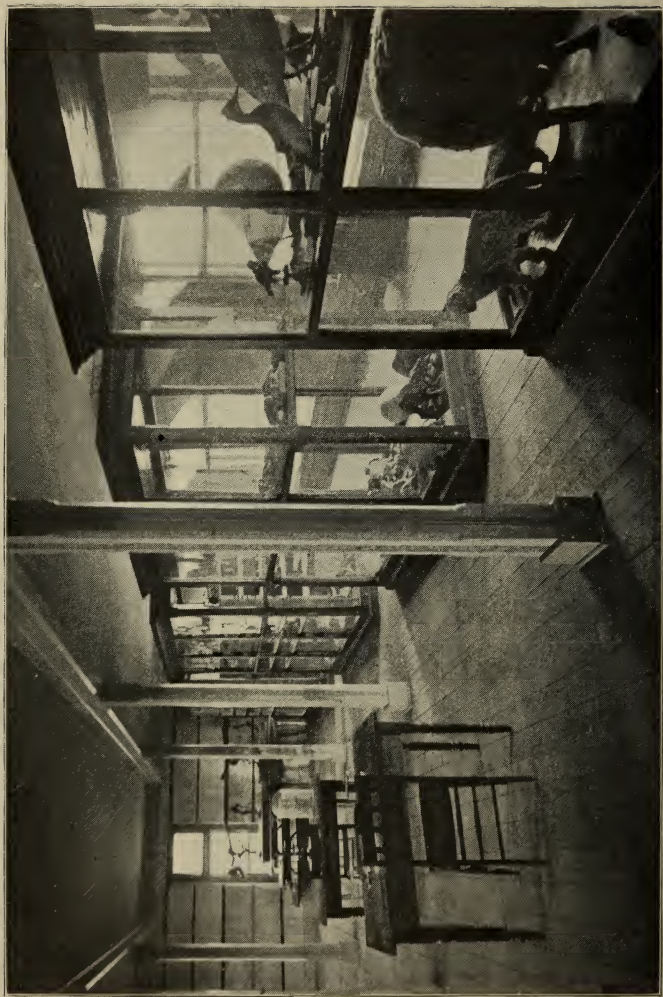
- a, Continuation of course 8. Every day, 9:30 to 10:30. R. 35.

Metcalf's Advanced Book completed.

Asst. in History.



3. II.—U. S. History, a, 60. Full.
 a, A brief survey of the principal events from the discovery to the beginning or the Nineteenth century.
 Every day, 10:30 to 11:30. R. 35.
 McMaster's School History of the U. S. to chapter XIX.
7. III.—U. S. History, a, 60. Full.
 Pre. 3.
 a, The leading events in U. S. History from the beginning of the nineteenth century to the present time.
 Every day, 2:00 to 3:00. R. 35.
 McMaster's School History completed from Chapter XIX.
 Chilcott.
5. I & IV.—Physical Geography, a, 60. Full.
 a, Physiography of the United States, introduction to Gl. 1, air, ocean and land. Lectures illustrated by stereopticon.
 Quar. I, every day, 2:00 to 3:00, R. 93. Quar. IV every day.
 10:30 to 11:30, R. 35. Tarr's Physical Geography.
 Orr.
6. I, II, & III.—Book-keeping, a, 30. Half.
 a, Single and double entry sets in retail mercantile business, journalizing, posting and closing ledger, ordinary banking processes.
 First half Quar. I, 10:30 to 11:30. R. 31.
 Quars., II & III, Mo., We. & Fri., 2:00 to 3:00. R. 31.
 Benton's Practical Book-keeping.
10. I & III.—Civil Government, a, 30. Half.
 a, An elementary study of our civil institutions, local, state and federal. The township, the school district, the incorporated town, the city and county, historical origin, mode of organization, officers and functions. The state, with special study of the constitution of South Dakota. The nation, branches of government, powers of congress, the relation of the states, careful study of the constitution. Recitations, readings and occasional reports.
 McCleary's Studies in Civics.
 Quar. I, every day last half, 9:30 to 10:30. R. 1.
 McLaren. Quar. III, Mo., We. & Fr., 10:30 to 11:30. R. 35.
12. I & IV.—Elementary Physiology, a, 50; b, 10. Full.
 a, The anatomy of the chief structures of the human body and their physiology.
 Mo, Tu., We., Th. & Fr., 2:00 to 3:00. R. 90.
 b, Applications in laboratory. Sat., 2:00 to 4:00. R. 90.
 Harding.
- Eh. 2. I—American Literature, a, 30. Half.
 Eh. 13. I—English, a, 60. Full.



ZOOLOGICAL LABORATORY.

DEPARTMENT OF ZOOLOGY.

Zo.

The work in this department is offered consecutively. Recent biological discoveries are given special consideration. The lecture rooms and laboratories are well supplied with water and gas. The equipment includes microscopes, dissecting instruments, sliding microtome, imbedding apparatus, thermostat incubator, autoclave, sterilizers, fossils, models and charts. The subsequent courses are descriptive of the work offered:

McLaren.

- r. 12. I & IV.—Elementary Physiology, a, 50; b, 10. Full.
1. I & III.—Elementary Zoology, a, 20; b, 10. Half.
- Pre. Ar. 1.
- a, Types of races and classes of animals. Tu. & Th., 9:30 to 10:30. R. 90.
- b, Dissection of typical vertebrates and insects. Burnett's Zoology. Sa., 2:00 to 4:00. R. 90.
- Needham's Zoology.
2. II.—Advanced Zoology, a, 40; b, 20. Full.
- Pre. 1, Ph. 2, and Ch. 2.
- a, Classification and comparative anatomy of animals. Mo., Tu., Fr., and Sa., 8:30 to 9:30. R. 90.
- b, Dissection of typical invertebrates. We. & Th., 2:00 to 4:00. R. 90.
3. IV.—Advanced Physiology, a, 60. Full.
- Pre. 1, Ph. 2 and Ch. 2.
- a, The principles of Animal Physiology with demonstrations and experiments. Every day, 10:30 to 11:30. R. 90.
- Thornton's Physiology.
4. II.—Vertebrate Morphology, a, 20; b, 40., in 1898. Full.
- Pre. 1, 2 & 3, Bt. 3 & 4 and Ms. 4.
- a, Comparative Anatomy of Vertebrates with especial reference to Osteology and Myology. We. & Th., 8:30 to 9:30. R. 90.
- b, Laboratory. Mo., Tu., Fr. & Sa., 2:00 to 4:00. R. 90.
- References, Wiedersheim's Anatomy.
- Quain's Anatomy.
5. III.—Animal Histology, a, 30; b, 30., in 1899. Full.
- Pre. 1, 2, & 3 or Bt. 3 & 4, Ch. 3, and Ms. 4.
- a, The histology of animal tissues and organs with their development and embryology. Mo., We. & Fr., 10:30 to 11:30. R. 90.

- b, Laboratory, Tu., Th. & Sa., 2:00 to 4:00. R. 90.
Stohr's Histology, Schafer's Embryology; references.
6. IV.—Animal Pathology, a, 30; b, 30, in 1899. Full.
Pre. 5 and Ch. 8.
- a, Pathology of animal tissues and organs with especial reference to bacteriology and hygiene. Mo., We. & Fr., 8:30 to 9:30. R. 90.
- b, Laboratory, Tu., Th. & Sa., 2:00 to 4:00. R. 90.
Frohner's Pathology, Delafield's Pathology, Mallory and Wright's Pathological Technique, Abbott's Bacteriology, Rohe's Hygiene.
7. II.—Invertebrate Morphology, a, 20; b, 40, in 1899. Full.
Pre. 1, 2 & 3, Ms. 4 and Ch. 7.
- a, Comparative Anatomy of the Invertebrates with training in microscopical technique. We. & Th., 8:30 to 9:30. R. 90.
- b, Laboratory. Mo., Tu., Fr. & Sa., 2:00 to 4:00. R. 90.
McMurrich's Invertebrate Morphology.
Stohr's Histology, references.
8. III.—Bacteriology, a, 30; b, 30, in 1900. Full.
Pre. 1, 2 & 3, Ms. 4, and Ch. 7.
- a, Study of the bacteria of milk, water, air, soil and disease with training in bacteriological technique. Mo., We. & Fr., 10:30 to 11:30. R. 90.
- b, Laboratory. Tu., Th. & Sa., 2:00 to 4:00. R. 90.
Sternberg's Bacteriology.
Abbott's Bacteriology, references.
9. IV.—Vertebrate Embryology, a, 30; b, 30, in 1900. Full.
Pre. 5 or 7.
- a, The embryology of the chicken and frog with a study of the development theory. Mo., We. & Fr., 8:30 to 9:30. R. 90.
- b, Laboratory. Tu., Th. & Sa., 2:00 to 4:00. R. 90.
Morgan's Embryology, Balfour's Embryology, references.
10. II.—Research in Animal Biology, b, 60. Full.
Pre. 5 or 7.
- b, Original investigation. Every day, 2:00 to 4:00. R. 90.
11. III.—Research in Animal Biology, a, 60. Full.
Every day, 2:00 to 4:00. R. 90.
12. IV.—Research in Animal Biology, b, 60. Full.
Continuation of 11. Every day, 2:00 to 4:00. R. 90.
- Sp. Practical Zoology, a, 10. Sixth.

INDEX.

Admission	40 & 119	Entomology	78
Advanced Standing	45	Entrance Conditions	45
Agriculture	73 & 92	Entrance Examinations	45
Agronomy	91	Equipment	35
Alumni	7	Establishment	31
Alumni Association	12	Examinations	52
Amount of Work	47	Expenses of Students	56
Animal Husbandry	73	Experiment Station	34 & 82
Animal Pathology	121	Explanatory Note	68
Architecture	69		
Arithmetic	84 & 119	Faculty	4 & 41
Art	71	Farm	36
Assembly	52	Farm Engineering	69
Astronomy	104	Finance	88
Athenian Society	30	First Reg. Band	39
Athletics	54	Forestry	96
Athletic Association	30	French	99
Attendance	52		
		General Information	31
B. S. Degree	49	General Policy	33
Botany	77	Geology	91
Bookkeeping	84 & 120	German	98
Buildings	35	Governing Board	40 & 3
		Grades	47
Calendar	59	Graduate Club	12 & 55
Campus	35	Graduates	7
Change of Major or Minor ..	47	Gymnasium	39
Change of Study	47		
Chemistry	79	Heating	39
Chorus Singing	53	History	93 & 120
Clay Modeling	72	Honors	50
Co-Education	51	Horticulture	95
College Days	44	Household Economy	85
Commercial Science Course ..	83		
Contents	2	Individual Work	51
Conditions of Admission ..	44 & 119	Industrial Collegian	26 & 55
Cooking	86	Information for Students ..	44
Course Defined	48	Internal Government	43
Credits	46		
		Laboratories	37
Daily Schedule	60	Ladies' Glee Club	30
Dairying	73 & 76	Landscape Gardening	95
Degrees	49	Latin	97
Departments	41 & 59	Law	88 & 94
Department	44 & 48	Leave of Absence	48
Determination of Grades	52	Lecture and Class Rooms	38
Dormitories	56	Literary Societies	54
Drawing	69, 71 & 109	Library and Reading Room ..	37
		Lighting	39
Economics	87	Location	32
Electives	49		
Electrical Engineering	118	Major and Minor Subjects ..	50
Elocution	53	M. S. Degree	49
Employes and Details	6	Mathematics	101
English	89 & 120	Mechanical Engineering	109
English Literature	89	Men's Glee Club	30
Enrollment in Classes	4	Method of Registration	46

Military Requirements.....	53 & 105	Sanitary Conditions	39
Military Roster.....	29	Scholarships.	50
Miltonian Society.....	30	Scientific French.....	100
Municipal Engineering.....	69	Scientific German.....	99
Museums.....	38	Scientific Latin.....	98
Music.....	107 & 53	Sewing.....	85
Nursery Course.....	96	Shop Work.....	109
Offices.....	38	Shorthand.....	83
Opening & Closing Programs..	56	Sources of Income	82
Oratorical Association.....	30	Special Students	46
Oratory.....	90	Steam Engineering.....	112
Organization.....	55	Steam Engineers' Society...	30
Painting.....	71	Students.....	43
Pharmacy.....	113	Student Information.....	44
Pharmacy Requirements	50	Student Labor.....	57
Philosophy.....	87	Student List.....	13
Physical Culture.....	54 & 108	Students' Living Arrange- ments.....	44 & 57
Physical Geography.....	120	Surveying.....	70
Physics.....	115	Terms and Vacations.....	42
Physiology.....	120	Time to Enter.....	56
Plan of Organization.....	33	Tutoring.....	44
Preparatory.....	119	Tutors.....	6
Prizes.....	51	Typewriting.....	84
Purpose.....	31	Typical Arrangement of Work	68
Regents of Education.....	3	Wood Carving.....	72
Regents' Officers.....	3	Y. M. C. A.	30 & 54
Religious Exercises.....	43	Y. W. C. A.	30 & 54
Required Courses.....	49	Zoology.....	121
Required Exercises.....	43		

LIST OF ILLUSTRATIONS.

View of Campus.	Exp. Sta. Chemical Laboratory.
Mechanical Drawing Room.	Soil Physics Laboratory.
Girls' Study.	Girls' Cottage.
Foot Ball Team.	In the Green House
Model Dining Room.	Industrial Collegian Staff.
In the Forcing House.	Class in Geometry.
Glympse of the Farm.	Wood Working Shop.
Party in Field Work.	Some College Buildings
Industrial Art Drawing Room.	Music Studio.
Botanical Laboratory.	Pharmaceutical Laboratory.
General Chemical Laboratory.	Advanced Physical Laboratory.
Practical Business Room.	General Physical Laboratory.
Judging Stock.	Machine Shop.
Sewing Room.	Zoological Laboratory.
Library.	Lecture Room.
President's Office.	Band.

